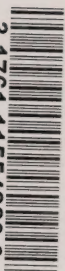


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REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE
Fiscal Year ending March 31, 1920

PRINTED BY ORDER OF PARLIAMENT



OTTAWA
THOMAS MULVEY
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1921

*To His Excellency the Duke of Devonshire, K.G., P.C., G.C.M.G., G.C.V.O., etc., etc.,
Governor General and Commander in Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

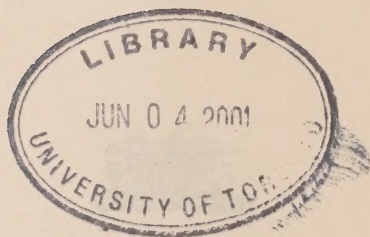
I have the honour to submit herewith for the information of Your Excellency and the Parliament of Canada, the Annual Report of the Department of Health, being for the year ended March 31, 1920.

I have the honour to be, sir,

Your Excellency's most obedient servant,

J. A. CALDER,

Minister of Health.



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| 96 | Public Religion |
| 97 | Public Amusements |
| 98 | Public Works |
| 99 | Police |
| 100 | Fire Department |



REPORT

OF THE

DEPARTMENT OF HEALTH

FOR THE FISCAL YEAR ENDING MARCH 31, 1920

OTTAWA, December 17, 1920.

Honourable J. A. CALDER,
Minister of Health,
Ottawa, Ont.

SIR,—I have the honour to report on the Department of Health for the year ending March 31, 1920, under the following headings:—

1. Quarantine Service.
2. Immigration Medical Service.
3. Food and Drug Laboratories.
4. Opium and Narcotic Drugs.
5. Proprietary or Patent Medicines.
6. Marine Hospitals' Service.
7. Venereal Disease Control.
8. Publicity and Statistics.
9. Financial Statement.
10. Child Welfare.
11. Housing.

(1) QUARANTINE SERVICE

This branch of the public service was transferred from the Department of Immigration and Colonization to the Department of Health on September 1, 1919.

During the year 1919-20, the following Quarantine Stations were kept in operation:—

Atlantic Coast.—Halifax, North Sydney and Louisburg, in the province of Nova Scotia; Chatham and St. John, in the province of New Brunswick; Charlottetown, in the province of Prince Edward Island; and Grosse Isle, in the province of Quebec.

Pacific Coast.—William Head, Victoria, B.C.

The total number of vessels inspected during the year was 1,916, and the number of persons examined 560,123. In the year 1918-19, 1,450 vessels were inspected and 277,910 persons examined.

During the year none of the graver quarantinable diseases were found at the various Quarantine Stations, with the exception of smallpox, of which there was one case at Chatham, one at Charlottetown, and two at William Head.

The following is a summary of the reports received from the medical officers at the different Quarantine Stations, giving the number of vessels inspected, passengers examined, diseases treated, detentions, etc.

11 GEORGE V, A. 1921

At Halifax, 481 vessels were inspected and 277,874 persons examined. Of these 25,323 were cabin passengers, 18,830 second-class, 179,874 steerage, and 53,778 crew. Twenty-seven cases were admitted to hospital and 15 contacts were detained. The diseases found were measles, la grippe, mumps, chickenpox, diphtheria and paratyphoid.

At North Sydney, 255 vessels were inspected and 9,431 persons examined. No quarantinable disease was found.

At Louisburg, 82 vessels were inspected and 4,391 persons were examined. No quarantinable disease was found.

At St. John, 228 vessels were inspected and 60,130 persons were examined, of which 7,901 were cabin passengers; 7,952 intermediate, 25,187 steerage, 9 cattlemen, 26 stowaways, 22 distressed seamen, 50 deckers and 18,983 crew. Thirty-six patients were admitted to hospital and 16 contacts detained. The diseases found were typhoid, diphtheria, scarlet fever, measles, influenza and chickenpox. One death occurred from measles.

At Chatham, 30 ships were examined and 610 persons. One case of smallpox was detained, the crew vaccinated and the steamer quarantined. No other quarantinable disease was found.

At Charlottetown three vessels were inspected. One case of smallpox was discovered which was taken to the quarantine hospital. The ship was quarantined till the man was discharged.

At Grosse Isle, 363 vessels were inspected and 141,260 persons examined, including 4,218 cabin passengers, 30,071 intermediate, 70,633 steerage, 36,286 crew, 21 cattlemen, and 31 stowaways. There were 208 admissions to hospital, including mumps, influenza, scarlet fever, variola, measles, diphtheria, dysentery, enteric fever and pneumonia. Hundreds were vaccinated.

At William Head, 174 ships were inspected and 55,977 persons examined, including 9,375 cabin passengers, 19,091 steerage and intermediate, 24,401 crew, 16 stowaways, and 3,094 troops. Three ships were quarantined, one for smallpox and two for influenza. The admissions to hospital (28) were for influenza, pneumonia, smallpox, measles, diphtheria, scarlet fever and mumps. There were four deaths during the year, two from smallpox and two from influenza.

Leper Lazaretto, Tracadie, N.B.—At the end of March, 1920, there remained 13 patients at this Lazaretto, seven males and six females. During the year two were admitted, one from Tracadie, the other Lameque, N.B. Two deaths occurred—both were in the last stages of the disease. Of the 13 patients remaining under treatment, 11 are French Canadian, one Icelandic and one Russian.

Leper Lazaretto, D'Arcy Island, B.C.—During the year, four lepers, all Chinese, were treated at this Lazaretto. One had so improved under the gynocardate treatment that he was released as cured on the 10th November, 1919, after all bacteriological tests had proved negative.

PUBLIC WORKS HEALTH ACT

The reports from the inspectors are to the effect that the medical services, sleeping quarters and board given to the men employed on the various works are quite satisfactory. The department is informed that the general good health of the men and the excellent sanitary condition of the various camps are evidence of the intention of the contractors to comply with the regulations of the Public Works Health Act.

SESSIONAL PAPER No. 12

(2) IMMIGRATION MEDICAL SERVICE

This branch of the public service was transferred from the Department of Immigration and Colonization to the Department of Health on September 1, 1919.

The immigration quarters at the various ocean ports, which were taken over by the military authorities during the war, were utilized during the present year by the Clearing Depot Services in connection with the general demobilization of ex-service men returning to this country with their dependents. As a consequence, the pre-war facilities for medical examination of immigrants not having been restored, that examination was, perhaps, not as satisfactory as it might otherwise have been. Apart from this, the unavoidable mingling of immigrants and soldiers contributed, in no small degree, to this somewhat unsatisfactory state of affairs.

Since the termination of the war a considerable increase in the number of immigrants has become very apparent, this being especially true in regard to British immigration.

While the Department of Health has not, as yet, had sufficient time to define and adopt a policy which will meet a long-felt want for more adequate means for the inspection of immigrants, it has, nevertheless, been able to secure the appointment of a few full-time medical officers at the ports of St. John and Halifax in lieu of those who were only part-time officers before the war. This innovation was made in the fall of 1919, and as the new appointees lacked training, the results from these few months could not be expected to be very appreciable. From what has been observed, however, this new policy is rather encouraging.

Statement showing number of immigrants inspected at the Atlantic and Pacific ports during the year 1919-20:—

Atlantic—

| | |
|---------------------------------------|--------|
| New York, Boston and Portland.. . . . | 4,019 |
| St. John.. . . . | 13,453 |
| North Sydney.. . . . | 414 |
| Halifax.. . . . | 11,161 |
| Quebec.. . . . | 37,125 |
| Total.. . . . | 66,172 |

Pacific—

| | |
|-------------------|-------|
| Vancouver.. . . . | 674 |
| Victoria.. . . . | 834 |
| Total.. . . . | 1,508 |

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STATEMENT OF DETENTIONS AND REJECTIONS FOR MEDICAL CAUSES AT OCEAN PORTS FOR FISCAL YEAR 1919-20.

| Causes. | Halifax. | | Montreal. | | New York. | | Portland. | | St. John. | | Quebec. | | Vancouver. | | Victoria. | | Totals. |
|---------------------------|----------|------|-----------|------|-----------|------|-----------|------|-----------|------|---------|------|------------|------|-----------|------|---------|
| | Det. | Rej. | Det. | Rej. | Det. | Rej. | Det. | Rej. | Det. | Rej. | Det. | Rej. | Det. | Rej. | Det. | Rej. | |
| Abortion..... | | | | | | | | | | | 4 | | | | | | 4 |
| Adenitis..... | | | | | | | | | | | 1 | | | | | | 1 |
| Amputated limb..... | | | | | | | | | | | 1 | | | | | | 1 |
| Anaemia..... | 1 | 1 | | | | | | | | | 5 | | | | | | 4 |
| Appendicitis..... | | | | | | | | | | | 2 | | | | | | 2 |
| Asthma..... | | | | | | | | | | | 1 | | | | | | 1 |
| Bronchitis..... | | | | | | | | | | | 1 | | | | | | 1 |
| Cellulitis..... | | | | | | | | | | | 1 | | | | | | 1 |
| Confinement..... | | | | | | | | | 1 | | 4 | | | | | | 5 |
| Conjunctivitis..... | | | | | | | | | | | | | | | | | 6 |
| Constipation..... | | | | | | | | | | | 1 | | | | 6 | | 7 |
| Epilepsy..... | 1 | 1 | | | | | | | | | 2 | 1 | | | | | 4 |
| Fractured rib..... | | | | | | | | | | | 1 | | | | | | 1 |
| General debility..... | | | | | | | | | | | 5 | | | | | | 5 |
| Gonorrhea..... | | | | | 1 | 1 | | | | | 1 | | | | 1 | 1 | 3 |
| Heart disease..... | | | | | 1 | 1 | | | | | 4 | | | | | | 6 |
| Imbecile..... | | | | | | | | | | | | | | | | | 7 |
| Impetigo..... | | | | | | | | | | | 3 | | | | | | 3 |
| Infected arm..... | | | | | | | | | | | 1 | | | | | | 1 |
| Insanity..... | | | | | 1 | 1 | | | | | | | | | | | 2 |
| Iritis..... | | | | | | | | | | | | | | | | | 3 |
| Measles..... | 8 | | | | | | | | 4 | | 1 | | | | | | 13 |
| Medical observation..... | 1 | 1 | | | | | | 11 | | | 5 | 2 | | | | | 25 |
| Mental observation..... | | | | | | | | | | | | | | | | | 7 |
| Mentally deficient..... | 1 | | | | | | | 6 | 1 | | | | | | | | 8 |
| Miscarriage..... | | | | | | | | | | | 5 | | | | | | 5 |
| Neurasthenia..... | | | | | | | | | | | | | | | | | 1 |
| Neuritis..... | | | | | | | | | | | 1 | | | | | | 2 |
| Observation of eyes..... | | | | | | | | | | | 2 | | | | | | 2 |
| Physically defective..... | | | | | | | | 1 | | | | 1 | | | | | 3 |
| Pleurisy..... | 1 | | | | | | | | | | | | | | | | 1 |
| Pneumonia..... | | | | | | | | | | | 1 | | | | | | 2 |
| Poor physique..... | | | | | | | | | | | 4 | 1 | | | | | 5 |
| Scabies..... | | | | | | | | | | | 1 | | | | | | 1 |
| Scarlet fever..... | 1 | | | | | | | | | | | | | | 18 | 2 | 21 |
| Seasickness..... | | | | | | | | | | | | | | | | | 1 |
| Trachoma..... | 1 | 1 | | | | | | | | | 1 | | 1 | | | | 3 |

11 GEORGE V, A. 1921

STATEMENT OF DEPORTATIONS FOR MEDICAL CAUSES, AFTER ADMISSION TO CANADA, AT OCEAN PORTS FOR FISCAL YEAR 1919-20.

| <i>Causes.</i> | Halifax | Montreal | New York | Portland | St. John | Vancouver | Victoria | Total |
|--------------------|---------|----------|----------|----------|----------|-----------|----------|-------|
| Drug habit..... | | | | | 1 | | | 1 |
| Epilepsy..... | | 1 | | | 1 | | | 2 |
| Feeble-minded..... | | 1 | | | 5 | | | 6 |
| Insanity..... | 1 | 32 | 14 | 2 | 14 | 3 | 1 | 67 |
| Nephritis..... | | 1 | | | | | | 1 |
| Neurasthenia..... | | | | | 1 | | | 1 |
| Syphilis..... | | | 1 | | | | | 1 |
| Tuberculosis..... | | 1 | | 1 | 4 | | | 6 |
| Total..... | 1 | 36 | 15 | 3 | 26 | 3 | 1 | 85 |

SUMMARY OF DEPORTATIONS AT OCEAN PORTS

| | Deport |
|-------------------------|--------|
| Halifax..... | 1 |
| Montreal..... | 36 |
| New York..... | 15 |
| Portland..... | 3 |
| St. John..... | 26 |
| Vancouver..... | 3 |
| Victoria..... | 1 |
| Total deportations..... | 85 |

(3) FOOD AND DRUG LABORATORY

This branch of the service was originated in 1884, under the Department of Inland Revenue, by the appointment of the late W. H. Sugden Evans as Chief Analyst. In September, 1918, the branch was transferred to the Department of Trade and Commerce, and on September 1, 1919, to the Department of Health. The present is therefore the first report of work done under the ægis of the Department of Health.

The organization of this branch involves central laboratories at Ottawa with a technical staff (normal) of thirteen permanent employees, and three sub-laboratories, situated at Halifax, Winnipeg and Vancouver, each staffed by an analyst in charge and one assistant. It is hoped that provision will be made during the coming year for a fourth sub-laboratory at Montreal. Occasional assistance in routine work is supplied.

The sub-laboratories have proved themselves of value, not only in reducing the work which has heretofore been done at Ottawa, but in enabling work to be performed and reported upon with greater promptitude. This is particularly of importance where consignments of imported goods are held up for examination as a condition of delivery.

SESSIONAL PAPER No. 12

The analyst in charge at Halifax reports work done during the year as follows. I may state that this sub-laboratory has been in commission since December, 1914:—

“According to the usual custom I submit herewith a detailed statement of work done, etc., in this sub-laboratory during the fiscal year ending March 31, 1920.

| No. Samples Received | Number Reported | Description | Date Reported |
|----------------------------|--------------------|--------------------------------------|------------------|
| | 12 | Chop feed..... | Apr. 9, 1919 |
| | 35 | Cloves, whole and ground..... | May 19 |
| 20 | 20 | Sweet spirits of Nitre..... | June 7 |
| 22 | 22 | Flour..... | “ 16 |
| 4 | 4 | Gluten flour..... | “ 26 |
| 39 | 39 | Seidlitz Powders..... | “ 26 |
| 38 | 38 | Beer, ale, etc..... | Aug. 13 |
| 25 | 25 | Packaged currants..... | “ 13 |
| 62 | 62 | Butter..... | Nov. 12 |
| 15 | 15 | Registered stock feed..... | Dec. 12 |
| 115 | 115 | Summer drinks..... | “ 12 |
| 7 | 7 | Maple butter..... | “ 18 |
| 56 | 56 | Baking powder..... | Jan. 21, 1920 |
| 75 | 75 | Black pepper..... | “ 23 |
| 70 | 70 | White pepper..... | “ 23 |
| 13 | | Fertilizers | |
| 561 | 595 | Special samples analyzed.— | |
| 66 | 66 | 26 Alcohol tests in beer, etc. | |
| | | 10 Customs export and imports— | |
| | | 7 Beans. | |
| | | 1 Sardines. | |
| | | 2 Export beer. | |
| | | 12 Butter, for Dept. of Agriculture. | |
| | | 6 Wood-pulp. | |
| | | 3 Oil shale. | |
| | | 3 Epsom salts. | |
| | | 2 Water. | |
| | | 1 Fertilizer. | |
| | | 1 Propeller bronze. | |
| | | 1 Oil. | |
| | | 1 Gasoline. | |
| 627 | 661 | | |

SUMMARY.

| | | |
|---|-----|--------|
| Total number of samples received..... | 627 | |
| “ “ reported..... | 661 | |
| Work on hand March 31, 1920..... | 13 | |
| Fees collected for analysis of special samples above mentioned..... | \$ | 136 00 |
| Number of prosecutions ordered..... | 37 | |
| Sweet spirits of nitre..... | 2 | |
| Butter..... | 2 | |
| Maple butter..... | 6 | |
| Pepper..... | 19 | |
| Registered stock feed..... | 1 | |
| Baking powder..... | 7 | |
| | 37 | |
| Number of prosecutions completed..... | 14 | |
| “ “ lost..... | 0 | |
| “ “ still pending..... | 23 | |
| Fines collected and deposited..... | \$ | 235 00 |
| Costs “ “..... | | 141 00 |
| Total revenue from fines and costs..... | | 376 00 |
| Total receipts..... | \$ | 512 00 |

(Sgd.) G. C. FORWARD
Analyst in Charge

11 GEORGE V, A. 1921

The analyst in charge at Winnipeg reports as below. This sub-laboratory has been in commission since April, 1915:—

“I beg to report as follows for the Winnipeg laboratory during the fiscal year ended March 31, 1920. The work reported is as follows:—

INSPECTORS' SAMPLES

| | |
|---------------------------------|-----|
| Fertilizers.. . . . | 9 |
| Olive oil.. . . . | 15 |
| Spirit of nitrous ether.. . . . | 6 |
| Maple butter.. . . . | 5 |
| Flour.. . . . | 26 |
| Seidlitz powders.. . . . | 4 |
| Maple syrup.. . . . | 3 |
| Gluten flour.. . . . | 1 |
| Camphor.. . . . | 2 |
| Packaged currants.. . . . | 14 |
| Malted liquors.. . . . | 14 |
| Butter.. . . . | 70 |
| Registered stock feeds.. . . . | 25 |
| Shorts.. . . . | 3 |
| Baking powders.. . . . | 54 |
| White pepper.. . . . | 87 |
| Black pepper.. . . . | 98 |
| Egg albumen.. . . . | 1 |
| Inspectors' samples.. . . . | 495 |

OCCASIONAL SAMPLES

| | |
|--|-----|
| Samples submitted for alcohol determinations.. . . . | 90 |
| Samples from shipments in Customs Bonds— | |
| Beans.. . . . | 23 |
| Evaporated apples.. . . . | 1 |
| Samples submitted by Department of Agriculture— | |
| Butter.. . . . | 39 |
| Canned peas.. . . . | 29 |
| Vinegar.. . . . | 4 |
| Water.. . . . | 1 |
| Milk.. . . . | 1 |
| Cream.. . . . | 1 |
| Glauber salts.. . . . | 1 |
| Marmalade.. . . . | 1 |
| Rum.. . . . | 1 |
| Gophericide.. . . . | 1 |
| Occasional samples.. . . . | 205 |
| Inspectors' samples.. . . . | 495 |
| Total samples.. . . . | 700 |

During the year a shipment of Chinese egg albumen was stopped in transit and ordered shipped out of Canada as the product was found to contain large excess of zinc. Seizures were made of several small stocks of cottonseed oil being sold as pure olive oil. A shipment of some 5,600 pounds of “maple syrup” was seized and declared forfeited to the Crown, the product being found not to be pure maple syrup.

(Sgd.) E. L. C. FORSTER,
Analyst in Charge.

SESSIONAL PAPER No. 12

Mr. J. A. Dawson, analyst in charge at Vancouver, which sub-laboratory has been in commission since February, 1915, reports as follows:—

I submit herewith statement of samples examined during the fiscal year 1919-20:—

| Date Reported | Description | J.A.D. | W.H.H | Total |
|---------------|-----------------------------|--------|-------|-------|
| April 7, 1919 | Gluten flour..... | | 2 | 2 |
| 24 | Sweet spirits of nitre..... | | 11 | 11 |
| May 6 | Seidlitz powder..... | 9 | | 9 |
| | Sweet spirits of nitre..... | | 10 | 10 |
| June 25 | " "..... | | 10 | 10 |
| 4 | Fertilizers..... | | 22 | 22 |
| 30 | Flour..... | | 12 | 12 |
| July 9 | Gluten flour..... | | 2 | 2 |
| Sept. 3 | Seidlitz powders..... | 20 | | 20 |
| 13 | Currants..... | 33 | | 33 |
| 18 | Gum camphor..... | 17 | | 17 |
| Oct. 22 | Butter..... | | 63 | 53 |
| Nov. 7 | Beer..... | 25 | | 25 |
| Dec. 11 | Registered stock feeds..... | | 60 | 60 |
| Feb. 11, 1920 | Summer drinks..... | | 78 | 78 |
| Mar. 23 | Baking powders..... | 58 | | 58 |
| 27 | Pepper..... | | 139 | 139 |
| | Special samples..... | 162 | 399 | 561 |
| | | 404 | 203 | 607 |
| | Totals..... | 566 | 602 | 1,168 |

SPECIAL SAMPLES

| | | | |
|-------------------------|-----|------------------------|-----|
| Alcohol..... | 2 | Maple butter..... | 6 |
| Apples, evaporated..... | 9 | " flavouring..... | 4 |
| Arsenic in meat..... | 1 | " sugar..... | 5 |
| Beans..... | 515 | " syrup..... | 5 |
| Beer..... | 3 | Marshmallow paste..... | 1 |
| Bran..... | 1 | Milk, evaporated..... | 6 |
| Butter..... | 2 | Milk, whole..... | 68 |
| Coffee..... | 1 | Oil, salad..... | 1 |
| Corn, canned..... | 2 | Oilcake..... | 1 |
| Egg, dried albumen..... | 14 | Soup, canned..... | 1 |
| " " yolk..... | 5 | Sugar..... | 2 |
| " " whole..... | 4 | Vanilla extract..... | 2 |
| Epsom salts..... | 2 | Whisky..... | 1 |
| Face cream..... | 1 | Wine..... | 2 |
| Feed, stock..... | 2 | | |
| Fertilizer..... | 2 | Total..... | 607 |
| Fish meal..... | 1 | | |
| Fish paste..... | 1 | | |

Sodium hydroxide solution supplied.....2 Winchester

(Sgd.) J. A. DAWSON,
Analyst in Charge.

The work done in this branch falls naturally under two heads which may be designated as police work and investigatory work. Most of the work done at the sub-laboratories is of the first-named order, and is concerned with supplying the evidence necessary for conviction in violations of the various Acts administered by this department. The investigatory work is of no less importance, and has for its object the accumulation of such information regarding the nature of specific classes of foods, drugs, fertilizers, etc., as may enable standards to be defined, and limits of variation to be fixed, in accordance with the requirements of these Acts. Owing to the limitations of staff at the sub-laboratories, and to the necessity for immediate supervision by the chief analyst, this class of work has been mainly carried out at the central laboratories at Ottawa.

On occasion, however, some work of this character has been performed at the sub-laboratories and I would refer in illustration to the excellent report of Mr. Dawson (Vancouver) upon lard and lard substitutes, published as Bulletin No. 414.

I may here draw attention to the recognized advantages of specific standards for foods, provision for such standardization being made by section 26 of the Adulteration Act.

When an article is offered as milk, butter, pepper, flour, vinegar, etc., the purchaser should know that such article possesses a certain food value, is, in other words, a standard article of its kind. It may not be the very best of its kind, but it must not fall below a certain fixed minimum value designated as the legally established standard. It is unnecessary to describe it as pure or genuine, because the mere fact that it meets standard requirements makes it pure and genuine, in a legal sense. Conversely, if in any respect it fails to meet the established standard, this fact is sufficient to condemn it as adulterated, in the sense in which this term is used in the Act.

The practical value of standardization is seen when we come before the courts of law. Thus an article sold as milk must contain at least 3.25 per cent milk fat. It is not sufficient that the material in question has been produced by a cow to constitute it a legally vendable milk. There are doubtless many cows which at certain periods of the year and under certain conditions of age, time elapsed since calving, general health and individual idiosyncrasy, yield a milk of less than 3.25 per cent fat. In one sense this product may be regarded as milk, but in the legal sense, it is not milk, i.e., not standard milk, and, if offered as such is open to penalization under the Act, just as truly as though it had been skimmed or watered. Did no legal standard exist as a guide to the analyst in his decision, and the court in its findings, it is easy to conceive that almost endless litigation might be involved in every case of prosecution for adulterated milk.

There is another aspect of the matter, namely, the temptation of the producer to work down to the legal standard, and thus to make market samples no better than the legal standard demands. This phase of the question need not be discussed here further than to say that, as a matter of fact, the tendency to place on the market foods which, while they meet our standards, are as close to those standards as the law allows, must be acknowledged as governing production. For example, we forbid the presence of more than 16 per cent of water in butter, and inspection of the article proves that manufacturers place on the market very little butter containing notably less than 16 per cent of water, although some years ago a great deal of market butter contained no more than 8 to 12 per cent and occasional samples of farm-made butter are found to-day to contain no more than this. The advantages of standardization are, however, so greatly in excess of its disadvantages, if such actually exist, that justification for legal standards is acknowledged.

It is always within the power of the producer of a super-standard article to describe it in such a way as to claim for it any superiority actually possessed by it.

Standards have been fixed for a great number of the most important food species; and these standards will continue to be improved and made more definite by revision as our knowledge of the subject increases. It is, of course, very important that, in the fixation of standards, the numerical constants accepted, shall not be such as to exclude from commerce any really valuable material, or to hamper production unnecessarily. Such action would tend unduly to raise the cost of living.

The only article investigated during the past year, with a view to standardization, and in regard to which our work justifies finality, is cloves, defined by Order in Council of May 12, 1919.

A reason for the limited amount of investigatory work performed during the year is found in the fact that three analysts left the employ of the department, for

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higher salaries offered them by private employers, and a fourth was absent from October, 1919, being granted leave, without salary, that he might carry out investigation as a post-graduate student, at the University of Toronto. It has been found impossible to fill existing vacancies with properly qualified men, at the salaries offered by the Civil Service Commission.

An important change in the inspectoral staff has been made during this year. Heretofore the work of inspection has been performed by men whose chief official duties were of another kind, related to the excise or to the preventive service. During this year, eleven out of a nominal staff of twenty-five inspectoral districts have been placed in charge of inspectors who give their whole time to this duty; and it is hoped that similar replacements by full-time men will be made in the remaining districts.

The work done at Ottawa during the fiscal year now reported comprises the following:—

OCCASIONAL SAMPLES

| | | | |
|-----------------------------|-----|--------------------------|-------|
| Acetaldehyde.. . . . | 2 | Maple sugar.. . . . | 11 |
| Acid.. . . . | 3 | Maple syrup.. . . . | 17 |
| Ale.. . . . | 1 | Milk.. . . . | 68 |
| Alcohol.. . . . | 10 | Milk powder.. . . . | 1 |
| Aspirin.. . . . | 2 | Molasses.. . . . | 1 |
| Bacon.. . . . | 1 | Mustard.. . . . | 5 |
| Baking powder.. . . . | 5 | Oil.. . . . | 26 |
| Beans.. . . . | 92 | Oilcloth.. . . . | 2 |
| Beer.. . . . | 4 | Olive oil.. . . . | 25 |
| Butter.. . . . | 190 | Oysters.. . . . | 1 |
| Cake.. . . . | 3 | Paraldehyde.. . . . | 1 |
| Calcium carbide.. . . . | 1 | Paint.. . . . | 26 |
| Castor oil.. . . . | 1 | Patent medicines.. . . . | 36 |
| Cheese.. . . . | 14 | Peanut butter.. . . . | 1 |
| Chocolate cake.. . . . | 7 | Peas.. . . . | 5 |
| Coffee.. . . . | 4 | Pepper.. . . . | 3 |
| Colouring matter.. . . . | 3 | Pepper shells.. . . . | 1 |
| Confectionery.. . . . | 2 | Poppy seed.. . . . | 1 |
| Cocoa.. . . . | 9 | Preservative.. . . . | 1 |
| Coca cola.. . . . | 5 | Rennet.. . . . | 1 |
| Crabapple oil.. . . . | 1 | Salad oil.. . . . | 4 |
| Cream.. . . . | 1 | Salmon.. . . . | 25 |
| Cream of tartar.. . . . | 3 | Salt.. . . . | 1 |
| Crotonaldehyde.. . . . | 1 | Screenings.. . . . | 3 |
| Currants.. . . . | 1 | Sewage.. . . . | 10 |
| Disinfectant.. . . . | 1 | Snuff.. . . . | 1 |
| Dubbin.. . . . | 1 | Soap.. . . . | 25 |
| Dutch cleanser.. . . . | 1 | Stock feed.. . . . | 21 |
| Enamels.. . . . | 6 | Sugar.. . . . | 11 |
| Evaporated egg.. . . . | 1 | Sweet oil.. . . . | 1 |
| Fertilizers.. . . . | 260 | Tags.. . . . | 2 |
| Flavouring extracts.. . . . | 2 | Tar.. . . . | 1 |
| Floor wax.. . . . | 18 | Turpentine.. . . . | 1 |
| Flour.. . . . | 213 | Urine.. . . . | 2 |
| Gasolene.. . . . | 2 | Vanilla extract.. . . . | 7 |
| Ginger.. . . . | 1 | Varnish.. . . . | 8 |
| Honey.. . . . | 6 | Vinegar.. . . . | 2 |
| Ink.. . . . | 4 | Water.. . . . | 12 |
| Izal.. . . . | 2 | Weed seeds.. . . . | 1 |
| Jam.. . . . | 5 | Wine.. . . . | 2 |
| Lime-juice.. . . . | 2 | | |
| Linseed oil.. . . . | 1 | | |
| Liquors.. . . . | 3 | | |
| Maple butter.. . . . | 7 | | |
| | | Total.. . . . | 1,275 |

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A critical examination of labels to the number of 205 has been made and reported.

The following reports have been issued in bulletin form:—

| BULLETINS ISSUED | | |
|------------------|--|-------------------|
| No. of Bulletin | Nature | Number of Samples |
| 427 | Clove, Whole and Ground.. . . . | 219 |
| 428 | Chop Feed.. . . . | 120 |
| 429 | Lime-Juice.. . . . | 60 |
| 430 | Linseed Oil and Substitutes.. . . . | 144 |
| 431 | Sweet Spirits of Nitre.. . . . | 184 |
| 432 | Turpentine as a Paint Material.. . . . | 118 |
| 433 | Seidlitz Powders.. . . . | 198 |
| 434 | Diabetic Foods.. . . . | 28 |
| 435 | Currants.. . . . | 111 |
| 436 | Butter.. . . . | 302 |
| 437 | Beer.. . . . | 153 |
| 438 | Registered Stock Food.. . . . | 205 |
| Total.. . . . | | 1,842 |

Prosecutions instituted number 239. Nature of samples:—

| | | | |
|-------------------------|----|--------------------------------|-----|
| Baking power.. . . . | 21 | Milk.. . . . | 43 |
| Butter.. . . . | 26 | Mustard.. . . . | 1 |
| Chocolate cake.. . . . | 3 | Olive oil.. . . . | 13 |
| Chop feed.. . . . | 13 | Pepper.. . . . | 9 |
| Coffee.. . . . | 1 | Registered feed.. . . . | 30 |
| Cream of tartar.. . . . | 4 | Salad oil.. . . . | 1 |
| Currants.. . . . | 3 | Seidlitz power.. . . . | 10 |
| Evaporated milk.. . . . | 3 | Sweet spirits of nitre.. . . . | 24 |
| Fertilizers.. . . . | 4 | Table sugar.. . . . | 2 |
| Lime-juice.. . . . | 12 | | |
| Maple butter.. . . . | 10 | Total.. . . . | 239 |
| Maple sugar.. . . . | 4 | | |
| Maple syrup.. . . . | 2 | | |

(4) OPIUM AND NARCOTIC DRUGS

On December 31, 1919, Chapter 25, entitled "An Act to Amend the Opium and Drug Act," 10 George V, was brought into force by proclamation of the Governor in Council, published in the issue of the *Canada Gazette* of the aforementioned date.

This Act superseded Orders in Council P.C. 1011 and P.C. 1012, under the authority of which the Department of Trade and Commerce administered the licensing of the imports and exports of narcotics up to December 31, 1919.

On February 26, 1920, Order in Council No. P.C. 433 was passed, placing the administration of the Opium and Narcotic Drug Act, Chapter 17, 1-2, George V, under the control and supervision of the Department of Health.

Prior to this date, the Opium and Drug Act was not under the supervision of any one department.

On February 26, 1920, Order in Council P.C. 434 was passed adding to the schedule of the Opium and Drug Act, after the word "Opium,"—"or its preparations, or any opium alkaloids, or their derivatives; or any salts or preparations or opium alkaloids or their derivatives."

This branch was only established on the 1st January, 1920, and its operations were very limited during the first three months of its existence.

(5) PROPRIETARY OR PATENT MEDICINES

At the commencement of the fiscal year April 1, 1919, this branch, under the control of the Department of Trade and Commerce, was administering the Proprietary or Patent Medicine Act of 1908, the Agricultural Fertilizers Act of 1909, and the Commercial Feeding Stuffs Act of 1909.

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The fundamental principle of the Proprietary or Patent Medicine Act of 1908 was to control the proportions of deleterious drugs in proprietary or patent medicines, or require the manufacturers to declare the presence of such drugs upon the labels and wrappers. The drugs referred to were enumerated in the schedule to the law.

The object of the Agricultural Fertilizers Act of 1909 and the Commercial Feeding Stuffs Act of 1909 was to require the manufacturers to place upon the packages, or tags attached thereto, the fertilizing value of his fertilizer, and the feeding value of his feeding stuff in terms prescribed by these Acts.

The two first-named laws were revised by amendments which became operative on the 7th July, 1919, and the 1st June, 1920, respectively.

A few of the important changes included in the new Proprietary or Patent Medicine Act affecting medicines subject to its provisions, are as follows:—

1. A separate registration number, the fee for which is \$2, must be procured for each internal and external medicine, and an annual license obtained at the rate of \$1 per preparation.
2. The use of opium, or any of its derivatives, is forbidden in internal medicines.
3. The proportions of scheduled drugs contained in each medicine per maximum dose must be furnished the department under affidavit, and also printed on the labels and wrappers.
4. Preparations must not be represented as “*curés*,” and misleading and exaggerated advertisements are prohibited.
5. An advisory board was established for the purpose of fixing the single and daily doses of scheduled drugs, and deciding the medication of preparations containing alcohol in excess of $2\frac{1}{2}$ per cent.

The amended Fertilizers Act increased the license fee to \$8, \$16, or \$24 per brand, according as the fertilizer contains one, two, or three of the following ingredients, that is to say, nitrogen, phosphoric acid and potash. The Act of 1908 required that only a single license fee of \$5 be paid annually, in order to procure a license authorizing the sale of all brands registered by a manufacturer or his agent.

This branch was taken over by the Department of Health on the 1st September, 1919.

(6) MARINE HOSPITALS SERVICE

This branch of the public service was heretofore administered by the Department of Marine, and was transferred to the Department of Health on the 1st November, 1919.

Under the provisions of Chapter 113, Canada Shipping Act, Part V (Sick and Distressed Mariners), dues of 1½ cent per ton, registered tonnage, are levied on every vessel entering any port in the provinces of Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and British Columbia. Vessels of a burden of 100 tons or less pay dues once in each calendar year; those of more than 100 tons, registered tonnage, pay three times in each calendar year.

The officers and seamen of all fishing vessels not registered in Canada do not pay dues, nor participate in the benefits accruing therefrom, but such vessels registered in Canada may pay dues and participate in the benefits.

The Act does not apply to Ontario, therefore no sick mariners' dues are collected from that province.

In consideration of the payment of these dues, sick and distressed mariners belonging to vessels on which said duty has been paid are entitled to gratuitous treatment. The expenditure for such treatment is defrayed out of the appropriation voted by Parliament for that purpose.

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Quebec.—In the province of Quebec sick mariners are treated at the following places:—

Quebec.—Jeffrey Hale and Hotel-Dieu hospitals.
 Montreal.—Montreal General and Notre Dame hospitals; contagious diseases at Alexandra and St. Paul's hospitals.
 Three Rivers.—St. Joseph's hospital.
 Chicoutimi.—Hotel-Dieu St Valier.
 Murray Bay.—St. Joseph hospital.
 Sorel.—General hospital.
 St. Johns.—St. John hospital.

Nova Scotia.—Marine hospitals are maintained at Louisburg, Lunenburg, and Sydney.

Halifax.—Seamen are treated at the Victoria General hospital; contagious diseases are treated at the City Health Board hospital.
 Pictou.—Pictou Cottage hospital.
 North Sydney.—Hamilton Memorial hospital.
 New Glasgow.—Aberdeen hospital.
 Antigonish.—St. Martha's hospital.
 Windsor.—Payzant Memorial hospital.
 Amherst.—Highland View hospital.
 Yarmouth.—Yarmouth hospital.
 Springhill.—Springhill Cottage hospital.

New Brunswick.—A Marine hospital is maintained at Douglastown.

St. John.—Seamen are treated at the General Public hospital; contagious diseases are treated at the City Health Board hospital.
 Moncton.—Moncton hospital.
 Campbellton.—Hotel Dieu hospital.
 Bathurst.—James Dunn hospital.
 St. Stephens.—Chipman Memorial hospital.

Prince Edward Island.—

Charlottetown.—Charlottetown hospital; Prince Edward Island hospital.
 Summerside.—Prince County hospital.

British Columbia.—

Victoria.—St. Joseph's hospital.
 Vancouver.—St. Paul's hospital.
 Prince Rupert.—Prince Rupert General hospital.
 New Westminster.—St. Mary's hospital.
 Nanaimo.—Nanaimo hospital.
 Ladysmith.—Ladysmith hospital.
 Chemanius.—Chemanius hospital.
 Union Bay.—Cumberland hospital.

Where there is no marine or designated hospital, the collector of customs makes best provisions possible for the treatment of sick mariners, at private or public boarding houses.

The total amount of sick mariners dues collected for the fiscal year 1919-20 was of \$78,227.04.

The total number of vessels which paid dues during the year was 3,027, and the number of seamen on these vessels was 71,778.

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The following statement shows the number of seamen treated, the number of days of hospital treatment and the expenditure by provinces:—

| Province | Number of seamen | Days treat- ment | Expend- iture |
|---------------------------|------------------------|------------------------|------------------|
| | | | \$ |
| Nova Scotia..... | 1,010 | 11,018 | 39,634 68 |
| New Brunswick..... | 415 | 4,264 | 15,853 11 |
| Prince Edward Island..... | 55 | 516 | 1,717 62 |
| Quebec..... | 623 | 6,797 | 17,743 15 |
| British Columbia..... | 449 | 5,189 | 12,590 50 |
| General Account..... | | | 1,347 30 |
| | 2,552 | 27,784 | 88,886 36 |

(7) VENEREAL DISEASE CONTROL

The sum of \$200,000 was granted by the Dominion Government for combatting venereal diseases in co-operation with the provinces.

Of this amount, \$10,000 was to be granted to the National Council for Combatting Venereal Diseases, and \$10,000 was retained for carrying on the work of this department.

The balance was to be divided among the provinces, in proportion to the population, and it was agreed, by the representatives of the provinces at the meeting of the Dominion Council of Health, held in Ottawa in October, that the provincial grants should be distributed in two half payments; the first to be given on the application of the interested province on its assurance that at least an equal amount of the province's money would be spent on the work; the second to be given six months after the first, and when the Department of Health is satisfied that real substantial work has been done.

The following agreement was entered into by the provinces accepting the grant:—

1. Establishment of clinics with specialist physicians in charge of treatment; with sufficient assistants to carry on the work efficiently and gratis to the patients.
2. Hospital beds for indoor patients; all treatment gratis.
3. Diagnostic laboratories for venereal disease work.
4. Efficient treatment for inmates of jails and places of detention.
5. A specialist in venereal disease diagnosis, treatment and propaganda to carry out the venereal disease work of the provinces.

Grants were made as follows:—

| | |
|---|-------------|
| Alberta..... | \$ 5,989 81 |
| Ontario..... | 28,736 84 |
| Nova Scotia..... | 5,286 93 |
| Saskatchewan..... | 7,680 82 |
| Manitoba..... | 6,305 60 |
| New Brunswick..... | 3,758 92 |
| British Columbia..... | 7,314 10 |
| Quebec..... | 23,694 40 |
| National Council for Combating V.D..... | 5,000 00 |
| Total..... | \$93,767 42 |

(8) PUBLICITY AND STATISTICS

Library.—Some 2,000 books were transferred from the Commission of Conservation to this department, which were sorted out and placed in order so that they might be referred to as desired. Considerable time was then spent in going over catalogues and referring to other departmental libraries for the purpose of ascertaining what books were available to bring the library up to as satisfactory a completion as possible.

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Mailing Lists.—As one of the most important items of the work of this branch would be the dissemination of publicity and statistics gathered together by this branch, considerable time and effort were spent in the getting together of up-to-date mailing lists covering the medical profession, dentists, veterinary surgeons, druggists, both wholesale and retail, women's institutes, in fact all branches of the public that would be interested in the information it was expected would be distributed.

Plans were made and the matter very thoroughly gone into for the starting of a monthly bulletin, which would be distributed throughout Canada, showing the various activities not only of this department, but the provincial and municipal branches of public health.

The Canadian Association for the Prevention of Tuberculosis was assisted in the getting out of a reprint of a book covering "Tuberculosis, its Cure and Prevention"; and a large number of these were distributed individually, as well as quantities sent out to the different provinces and other associations in bulk.

The matter of publications, which it would, in all probability, be necessary to issue, was carefully considered, and while no publications were actually gotten out, preliminary details necessary before such issues could be printed were gotten together.

Arrangements were made whereby morbidity and mortality statistics would be obtained regularly from the different provinces, as well as the Dominion Bureau of Statistics, which data it was intended should be distributed in such a way as to permit of comparisons being made between the various sections of the Dominion.

(9) STATEMENT OF APPROPRIATION ACCOUNTS FOR FISCAL YEAR 1919-20.

| No. of Vote. | Service. | Appropriation. | | Expenditure. | | Balance Unexpended | |
|--------------------|---|----------------|------|--------------|------|--------------------|------|
| | | \$ | cts. | \$ | cts. | \$ | cts. |
| 54 | Quarantine, lazarettoes and Public Works Health Act.. | 241,000 | 00 | 222,505 | 78 | 18,494 | 22 |
| 330 | Adulteration of food, etc..... | 70,000 | 00 | 42,001 | 77 | 27,998 | 23 |
| 330 | Proprietary or patent medicines..... | 3,000 | 00 | 2,985 | 42 | 14 | 58 |
| 418 | Salary of deputy minister..... | 6,000 | 00 | 4,290 | 32 | 1,709 | 68 |
| 418 | *Salaries of staff and contingencies..... | 60,000 | 00 | 26,802 | 54 | 33,197 | 46 |
| 225) | | | | | | | |
| 498) | Marine hospitals..... | 97,500 | 00 | 88,886 | 36 | 8,613 | 64 |
| War | Housing (from November 1, 1919)..... | 8,000 | 00 | 6,022 | 29 | 1,977 | 71 |
| 522 | For combatting venereal diseases..... | 200,000 | 00 | 93,767 | 42 | 106,232 | 58 |
| | | 685,500 | 00 | 487,261 | 90 | 198,238 | 10 |

*The officials transferred to the Department of Health, paid from Civil Government Salaries, were paid by the department from which they were transferred to March 31, 1920.

STATEMENT OF REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL YEAR ENDED MARCH 31, 1920.

| Service. | Total Revenue. | | Refunds. | | Net Revenue. | |
|------------------------------|----------------|------|----------|------|--------------|------|
| | \$ | cts. | \$ | cts. | \$ | cts. |
| A. Adulteration of food..... | 11,492 | 57 | 28 | 42 | 11,464 | 15 |
| B. Feeding stuffs..... | 758 | 00 | | | 758 | 00 |
| C. Fertilizers..... | 10,389 | 00 | | | 10,389 | 00 |
| D. Patent medicines..... | 4,302 | 00 | 18 | 00 | 4,284 | 00 |
| E. Sick mariners' dues..... | 78,686 | 01 | 458 | 97 | 78,227 | 04 |
| Casual Revenue..... | 2,034 | 80 | | | 2,034 | 80 |
| Total revenue..... | 107,662 | 38 | 505 | 39 | 107,156 | 99 |

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"A" ADULTERATION OF FOOD REVENUE FOR 1919-20.

| | Analysis. | | Fines and Forfeitures. | | Costs. | | Total. | |
|---------------------------|-----------|------|------------------------|------|--------|------|--------|------|
| | \$ | cts. | \$ | cts. | \$ | cts. | \$ | cts. |
| Nova Scotia..... | 149 | 00 | 585 | 00 | 249 | 20 | 983 | 20 |
| New Brunswick | 31 | 00 | 150 | 00 | 56 | 00 | 237 | 00 |
| Prince Edward Island..... | 10 | 00 | 50 | 00 | 18 | 00 | 78 | 00 |
| Quebec..... | 105 | 25 | 3,439 | 75 | 605 | 00 | 4,150 | 00 |
| Ontario..... | 2,158 | 00 | 1,117 | 00 | 497 | 95 | 3,772 | 95 |
| Manitoba..... | 189 | 00 | 485 | 00 | 198 | 00 | 872 | 00 |
| Saskatchewan..... | 29 | 00 | 60 | 00 | 24 | 00 | 113 | 00 |
| Alberta..... | | | 235 | 00 | 12 | 00 | 247 | 00 |
| British Columbia..... | 70 | 00 | 725 | 00 | 241 | 00 | 1,036 | 00 |
| | 2,741 | 25 | 6,846 | 75 | 1,901 | 15 | 11,489 | 15 |
| Less refunds..... | | | 25 | 00 | | | 25 | 00 |
| Net total..... | 2,741 | 25 | 6,821 | 75 | 1,901 | 15 | 11,464 | 15 |

"B" FEEDING STUFFS REVENUE FOR 1919-20.

| | Licenses. | | Brands. | | Total. | |
|-----------------------|-----------|------|---------|------|--------|------|
| | \$ | cts. | \$ | cts. | \$ | cts. |
| Nova Scotia..... | 5 | 00 | | | 5 | 00 |
| Quebec..... | 30 | 00 | 4 | 00 | 34 | 00 |
| Ontario..... | 295 | 00 | 196 | 00 | 491 | 00 |
| Manitoba..... | 45 | 00 | 4 | 00 | 49 | 00 |
| Saskatchewan..... | 10 | 00 | 4 | 00 | 14 | 00 |
| Alberta..... | 20 | 00 | 4 | 00 | 24 | 00 |
| British Columbia..... | 55 | 00 | 14 | 00 | 69 | 00 |
| Foreign..... | 70 | 00 | 2 | 00 | 72 | 00 |
| Total..... | 530 | 00 | 228 | 00 | 758 | 00 |

"C" FERTILIZERS REVENUE FOR 1919-20.

| | Licenses. | | Brands. | | Total. | |
|-----------------------|-----------|------|---------|------|--------|------|
| | \$ | cts. | \$ | cts. | \$ | cts. |
| Nova Scotia..... | 1,173 | 00 | 86 | 00 | 1,259 | 00 |
| New Brunswick..... | 776 | 00 | 16 | 00 | 792 | 00 |
| Quebec..... | 712 | 00 | 52 | 00 | 764 | 00 |
| Ontario..... | 2,608 | 00 | 174 | 00 | 2,782 | 00 |
| Manitoba..... | 128 | 00 | 2 | 00 | 130 | 00 |
| Alberta..... | 144 | 00 | | | 144 | 00 |
| British Columbia..... | 320 | 00 | 18 | 00 | 338 | 00 |
| Foreign..... | 3,936 | 00 | 244 | 00 | 4,180 | 00 |
| Total..... | 9,797 | 00 | 592 | 00 | 10,389 | 00 |

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"D." PATENT MEDICINES REVENUE FOR 1919-20.

| | Certifi- cates. | Registra- tion Fees. | License Fees. | Total. |
|---------------------------|--------------------|----------------------------|------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 14 00 | 32 00 | 16 00 | 62 00 |
| New Brunswick..... | 9 00 | 42 00 | 21 00 | 72 00 |
| Prince Edward Island..... | | 2 00 | 1 00 | 3 00 |
| Quebec..... | 88 00 | 600 00 | 300 00 | 988 00 |
| Ontario..... | 182 05 | 1,202 00 | 601 00 | 1,985 05 |
| Manitoba..... | 10 00 | 32 00 | 16 00 | 58 00 |
| Saskatchewan..... | 2 00 | 4 00 | 2 00 | 8 00 |
| Alberta..... | 4 00 | 36 00 | 20 00 | 60 00 |
| British Columbia..... | 14 00 | 38 00 | 19 00 | 71 00 |
| Foreign..... | 46 95 | 632 00 | 316 00 | 994 95 |
| | 370 00 | 2,620 00 | 1,312 00 | 4,302 00 |
| Less refunds..... | | 12 00 | 6 00 | 18 00 |
| Net total..... | 370 00 | 2,608 00 | 1,306 00 | 4,284 00 |

"E." SICK MARINERS' DUES COLLECTIONS FOR 1919-20.

| Province. | Total Revenue. | Refunds. | Net Revenue. |
|---------------------------|-------------------|----------|-----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 22,818 32 | 276 32 | 22,542 00 |
| New Brunswick..... | 14,395 63 | | 14,395 63 |
| Prince Edward Island..... | 186 13 | | 186 13 |
| Quebec..... | 26,444 94 | 66 57 | 26,378 37 |
| British Columbia..... | 14,840 99 | 116 08 | 14,724 91 |
| | 78,686 01 | 458 97 | 78,227 04 |

(10) CHILD WELFARE

The appointment of Chief of the Division of Child Welfare in the Department of Health was announced by the Civil Service Commission on Saturday, April 10. There is, therefore, not any report of the Division of Child Welfare for the official year ending March 31, 1920.

(11) HOUSING

The administration of the Housing Project under the constitution of the Housing Committee of the Cabinet was transferred by Order in Council P.C. 2204 to the Department of Health as of date November 1, 1919.

The activities of the branch at this date were as follows:—

Preparing standards and recommendations in connection with provincial housing schemes and considering modifications from time to time.

Preparing draft schemes and amendments thereof for Provincial Governments, schemes and considering modifications from time to time.

Preparing draft schemes and amendments thereof for provincial Governments.

Considering and discussing amendments proposed by provincial officials re schemes. Advising regarding details and administration.

Reporting with regard to compliance of schemes with federal requirements after study of schemes.

Conferring with Provincial Governments, municipalities with provincial consent, regarding local application of Government loan and standards.

Preparing model plans and for that purpose studying plans in other countries, and collecting data re materials, standardization, ventilation, sanitation, costs, etc.

Advising regarding planning of sites so as to secure economy in local improvements and housing.

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Collecting data regarding existing housing conditions as to shortage, increase of costs and rentals, and methods of reducing costs and rentals.

Preparing comparative information regarding methods of standardization, costs of construction, town planning procedure, etc.

Preparing reports from time to time and dealing with extensive correspondence.

Collecting data and advising regarding schemes of reconstruction of slum areas.

Co-operating with the various departments in removing causes of bad housing conditions and effecting remedies where such conditions already exist, having regard to the importance of housing and its connection with industries and transportation in town planning schemes.

The following is a brief summary of what has been accomplished under the terms of the Federal Loan in the provinces of the Dominion.

PRINCE EDWARD ISLAND

Act passed but no general housing scheme prepared.

According to the Act a soldier, or the widow or the widowed mother of a soldier, may be advanced 90 per cent of the value of the house, land and improvements, where land is owned by the housing commission. Civilians must purchase land from the commission and are advanced 90 per cent of the value of house and improvements.

In general a municipality is required to deposit debentures with provinces as security, and may also be required to assign to the provinces securities obtained from owners of land.

NOVA SCOTIA

Act passed and Federal conditions complied with. Soldier, widow or widowed mother may be advanced 100 per cent of the value of house, land and improvements, where the land has been acquired by a housing commission. Civilians must purchase the land (or advance 10 per cent of the value of house, land and improvements) from commission.

Municipality deposits debentures with provinces without limiting borrowing powers. Several towns have appointed housing commissions and it is expected that there will be at least one hundred houses commenced this spring.

NEW BRUNSWICK

Act passed and Federal conditions complied with. The Act mentions "particularly returned soldiers."

Municipality provides security without limiting borrowing powers. Some fifty houses (all frame without heating) have been built in New Brunswick under the Act.

QUEBEC

Act passed and Federal conditions complied with. Preamble to Act states "particularly for returned soldiers and workmen of town."

Municipality arranges for loan without limiting its borrowing powers.

The Director of Housing in Quebec has laid down the principle that garden suburbs are to be developed in the neighbourhood of chief industrial centres. It is understood that altogether some twenty houses are now completed or in course of erection. There is, however, a large programme for the development of garden suburbs in the near future.

Amendments to the General Housing Scheme passed on the 17th May, 1919, were approved by Order in Council P.C. 1090 on the 19th May, 1920, which provides:—

1. That if the city of Montreal appoints a commission under the provisions of the Quebec Housing Act of 1919, the approval of the Provincial Director of Housing shall not be required for the building scheme of the said city of Montreal.

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2. For obtaining the benefit of the amendments of the Federal project set out in the Orders in Council of the Dominion Government, P.O. 1766 of 1919 and P.C. 639 of 1920.

3. The transfer of land from the owner to the municipality and the subsequent reconveyance of land and building, when constructed, to the owner after a certain percentage of the cost has been met by the owner.

ONTARIO

Act passed and federal conditions complied with. A provincial loan has also been provided. Municipalities deposit debentures with province without limiting borrowing powers.

Returned soldiers are granted the same advantages as under the Nova Scotia Act. There have been about 1,200 houses built, due to the activities of the Housing Director, and an efficient technical staff with the aid of local housing commissions.

In addition to the foregoing action the province of Ontario has enacted this session the "Municipal Housing Act, 1920," which is very similar to the Ontario Housing Act of 1919, except that instead of enjoying the federal loan at five per cent, debentures issued by the municipalities and guaranteed by the province, will probably mean money at six per cent to the owner building a house. Also, while the maximum cost of house and land, according to the 1919 Act, is \$4,500, according to the "Municipal Housing Act, 1920," this becomes \$5,100.

MANITOBA

Act passed and Federal conditions complied with. This is largely an enabling Act. Returned soldiers, as defined in the Civil Service Act, are to receive preference over all other applicants for loan. According to latest reports, the various municipalities bordering the city of Winnipeg are taking advantage of the Act. Over seventy houses have been built and are occupied, while twice that number are in course of erection, and it is expected that about 350 will be built this year. Manitoba intends to make a provincial grant of \$1,000,000 in addition to the Federal loan.

SASKATCHEWAN

Act passed applying only to returned members of His Majesty's forces. Otherwise it is similar to the Manitoba Act and is an enabling Act only. No general housing scheme has been prepared to comply with the Federal housing conditions, therefore the Act is inoperative. This is due, it is understood, largely to the inability of the province to recommend an increase in the borrowing powers of the municipalities at the present time.

A housing scheme was submitted by this province on the 14th May, 1920, and has been approved.

ALBERTA

No Act has yet been passed, although it is understood it is being considered.

BRITISH COLUMBIA

Act passed and Federal conditions complied with. This is largely an enabling Act and gives special preference to returned soldiers. The Government may convey free land to soldiers as defined in the Soldiers' Land Act, or to municipalities in connection with better housing for soldiers. The Act as administered up to the present, it is understood, has applied solely to returned soldiers. There are fifty houses built and occupied, ninety houses under construction, and the number of houses expected to be built this year is between two and three hundred.

Respectfully submitted.

J. A. AMYOT,
Deputy Minister.

REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE
FISCAL YEAR ENDED MARCH 31, 1921

PRINTED BY ORDER OF PARLIAMENT



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1922

*To His Excellency the Duke of Devonshire, K.G., P.C., G.C.M.G., G.C.V.O., etc., etc.,
Governor General and Commander in Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith for the information of Your Excellency and the Parliament of Canada, the Annual Report of the Department of Health, being for the year ended March 31, 1921.

I have the honour to be, sir,

Your Excellency's most obedient servant,

J. A. CALDER,

Minister of Health.

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REPORT OF THE DEPARTMENT OF HEALTH

FOR THE FISCAL YEAR ENDED MARCH 31, 1921

OTTAWA, July 1, 1921.

Honourable J. A. CALDER,
Minister of Health,
Ottawa, Ont.

SIR,—I have the honour to report on the Department of Health for the year ended March 31, 1921, under the following headings:—

1. Quarantine Service.
2. Immigration Medical Service.
3. Food and Drug Laboratories.
4. Opium and Narcotic Drugs.
5. Proprietary or Patent Medicines.
6. Marine Hospitals Service.
7. Venereal Disease Control.
8. Publicity.
9. Child Welfare.
10. Housing.
11. Public Works Health Act.
12. Financial Statement.

(1) QUARANTINE SERVICE

During the year 1920-21 the following stations were kept in operation:—

Charlottetown, P.E.I., (Keppoch Station).
Chatham, N.B., (Middle Island Station).
Halifax, N.S., (Lawlor's Island Station).
Louisburg, N.S.
North Sydney, N.S., (Point Edward Station).
Quebec, P.Q., (Grosse Isle Station).
St. John, N.B., (Partridge Island Station).
Victoria, B.C., (William Head Station).

The total number of vessels which reported at the various stations was 1,481 and the number of persons examined 387,070, classified as follows:—

| | | | |
|----------------|----------------|---------|---------|
| Passengers | 1st class..... | 25,470 | |
| | 2nd class..... | 62,336 | |
| | Steerage..... | 169,608 | |
| | | | 257,414 |
| Stowaways..... | | | 296 |
| Cattlemen..... | | | 56 |
| Crews..... | | | 129,304 |
| Total..... | | | 387,070 |

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The following is a tabular statement of vessels and persons inspected at each station:—

| Station | Vessels | Persons (Passengers, Crews, etc.) |
|-------------------------------|---------|---|
| Charlottetown, P.E.I. | Nil | Nil |
| Chatham, N.B. | 19 | 281 |
| Halifax, N.S. | 318 | 68,522 |
| Louisburg, N.S. | 58 | 2,136 |
| North Sydney, N.S. | 194 | 9,579 |
| Quebec, P.Q. | 451 | 174,412 |
| St. John, N.B. | 223 | 62,412 |
| Victoria, B.C. | 218 | 69,728 |
| Total. | 1,481 | 387,070 |

The number of admissions to the quarantine hospitals during the year was 609, with the following distribution:—

| | |
|-------------------------------|-----|
| Charlottetown, P.E.I. | Nil |
| Chatham, N.B. | Nil |
| Halifax, N.S. | 63 |
| Louisburg, N.S. | Nil |
| North Sydney, N.S. | Nil |
| Quebec, P.Q. | 404 |
| St. John, N.B. | 117 |
| Victoria, B.C. | 25 |
| Total. | 609 |

Of these 609 hospital admissions, 283 were patients; the remaining 326 were contacts, observations, or persons accompanying the sick.

The total number of days in hospital was 7,650, viz., 3,722 for the sick and 3,928 for the contacts, etc.

Of the graver quarantinable diseases, smallpox was the only one met with during the year, there being four cases and nine contacts. One secondary case developed among the contacts. All five cases recovered and there was no spread of the disease to other persons.

Of the minor infectious diseases, there were 279 cases admitted to hospital, with 317 contacts and persons accompanying. Ten secondary cases developed among the contacts, viz., measles, 6; diphtheria, 3; chickenpox, 1.

Four deaths occurred during the year—three at Grosse Isle (1 diphtheria, 1 scarlet fever, and 1 pneumonia), and one at St. John of encephalitis lethargica.

The following table shows the distribution by stations:—

| Station | No. of Sick | No. of days in Hospital | No. of Contacts, Observations, accompanying sick, etc. | No. of days in Hospital | Total No. of Sick and Contacts, etc. | Total days in Hospital |
|-------------------|----------------|-------------------------------|--|-------------------------------|---|------------------------------|
| Halifax. | 32 | 323 | 31 | 322 | 63 | 645 |
| Quebec. | 180 | 1,988 | 224 | 2,446 | 404 | 4,434 |
| St. John. | 59 | 1,219 | 58 | 1,053 | 117 | 2,272 |
| Victoria. | 12 | 192 | 13 | 107 | 25 | 299 |
| Totals. | 283 | 3,722 | 326 | 3,928 | 609 | 7,650 |

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The following table shows the classification by diseases:—

| Diseases | Patients | Contacts, etc. | Days in Hospital | | |
|--------------------------------|----------|-------------------|------------------|----------|--------|
| | | | Patients | Contacts | Totals |
| Smallpox..... | 4 | 9 | 105 | 146 | 251 |
| Influenza..... | 3 | 9 | 77 | 154 | 231 |
| Pneumonia..... | 5 | 5 | 106 | 117 | 223 |
| Whooping cough..... | 1 | 1 | 26 | 26 | 52 |
| Chickenpox..... | 17 | 13 | 220 | 126 | 346 |
| Measles..... | 78 | 100 | 1,097 | 1,116 | 2,213 |
| Diphtheria..... | 27 | 48 | 340 | 531 | 871 |
| Scarlet fever..... | 18 | 29 | 582 | 779 | 1,361 |
| Mumps..... | 15 | 15 | 140 | 148 | 288 |
| Scabies..... | 4 | ..... | 88 | ..... | 88 |
| Rheumatic fever..... | 1 | 1 | 13 | 13 | 26 |
| Encephalitis lethargica..... | 1 | ..... | 2 | ..... | 2 |
| Vincent's angina..... | 1 | ..... | 10 | ..... | 10 |
| Vaccination..... | 6 | ..... | 24 | ..... | 24 |
| Cerebro spinal-meningitis..... | 1 | 2 | 7 | 10 | 17 |
| Enteric fever..... | 5 | 1 | 170 | 36 | 206 |
| Malaria..... | 3 | ..... | 58 | ..... | 58 |
| Quinsy..... | 3 | 9 | 37 | 63 | 100 |
| Erysipelas..... | 1 | 3 | 4 | 12 | 16 |
| Toxic rash..... | 1 | ..... | 66 | ..... | 66 |
| Tonsillitis..... | 4 | 12 | 66 | 114 | 180 |
| Delousing..... | 49 | 3 | 202 | 11 | 213 |
| Fever observations, etc..... | 35 | 66 | 282 | 526 | 808 |
| Totals..... | 283 | 326 | 3,722 | 3,928 | 7,650 |

LEPER STATIONS

At the D'Arcy Island Station, British Columbia, which is under the superintendency of the medical officer in charge of the William Head Quarantine Station, five patients, all Chinese, were treated. One new case was admitted December 23, 1920, the other four remaining from the previous year. The total number of hospital days was 1,559.

At the Tracadie Lazaretto, New Brunswick, fourteen lepers were treated, seven females and seven males. One death occurred and one new patient was admitted. Dr. J. A. Langis, Medical Superintendent, reports conditions satisfactory. The total number of hospital days was 4,596.

(2) IMMIGRATION MEDICAL SERVICE

During the fiscal year ended March 31, 1921, there were examined by officers of the Immigration Medical Service at the Atlantic and Pacific ports, 109,529 immigrant passengers, for the purpose of detecting disease or physical or mental defects, in accordance with the provisions of the Immigration Act.

The total number of immigrant passengers detained for medical treatment or for secondary examination, etc., was 696. Of this number, 316 were subsequently released as either cured or negative. Detailed statements follow, showing detentions by ports, also reasons for detention.

The total number of immigrants "certified" under the respective subsections of section 3 of the Immigration Act is made up as follows:—

| | |
|--|-----|
| Subsection (a)—Mental defects..... | 33 |
| Subsection (b)—Tubercular, loathsome or contagious diseases..... | 81 |
| Subsection (c)—Physically defective..... | 713 |
| Subsections (d), (k), (l) and (m)..... | 18 |
| Total "certified"..... | 845 |

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These figures include both the immigrants "certified" at time of arrival and those who were "certified" following detention for secondary examination.

Where immigrants are found to be suffering from minor defects not sufficient to justify their certification under section 3 of the Immigration Act, their condition and destination is noted on a record card which is kept on file for future reference. During the fiscal year 1,047 persons were so recorded. A statement follows showing the numbers by ports.

IMMIGRANT PASSENGERS MEDICALLY INSPECTED AT OCEAN PORTS

| | |
|---|---------|
| Quebec..... | 77,076 |
| St. John..... | 16,915 |
| Halifax..... | 10,799 |
| Montreal..... | 393 |
| North Sydney..... | 901 |
| Vancouver..... | 1,999 |
| Victoria..... | 1,446 |
| United States ports (New York, Boston, Philadelphia and Portland) | 3,359 |
| Total..... | 112,888 |

Immigrants detained at the respective ports showing causes.

| Causes | Quebec | St. John | Halifax | Montreal | Vancouver | Victoria |
|--------------------------------|--------|----------|---------|----------|-----------|----------|
| Abortion..... | 4 | | | | | |
| Abscess..... | 1 | | | | | |
| Adenitis..... | | | | | | 1 |
| Aphthae..... | 1 | | | | | |
| Appendicitis..... | 1 | | | | | |
| Asthma..... | 1 | | | | | |
| Boil..... | 2 | | | | | |
| Bursitis patellae..... | 1 | | | | | |
| Bronchitis..... | 2 | | | | | |
| Carbuncle..... | 2 | | | | | |
| Cellulitis..... | | | 1 | | | |
| Chancre..... | | | 1 | | | |
| Chancroid..... | | | 1 | | | |
| Chickenpox..... | 2 | | | | | |
| Childbirth..... | 7 | | | | | |
| Confinement..... | 2 | | | | | |
| Conjunctivitis..... | 18 | | 9 | | 20 | 14 |
| Corneal ulcer..... | 2 | | | | | |
| Deafness..... | | | 1 | | | |
| Dermatitis..... | 2 | | | | | |
| Diphtheria..... | 1 | | | | | |
| Dysentery..... | 1 | | | | | |
| Eczema..... | 1 | | | | | |
| Erythema..... | 1 | | | | | |
| Fracture of leg..... | 1 | | | | | |
| Furunculosis..... | 4 | | | | | |
| General observation..... | 71 | 3 | 12 | | | |
| Gonorrhoea..... | 1 | | | | | |
| Heart disease..... | | | 1 | | | |
| Impaired function of leg..... | | | 1 | | | |
| Impetigo..... | 16 | | 9 | 1 | | |
| Infected hand..... | 2 | | | | | |
| Intestinal obstruction..... | 1 | | | | | |
| Jaundice..... | 1 | | | | | |
| Measles..... | 3 | | 2 | | | |
| Mental inferiority..... | | | 2 | | | |
| Mental observation..... | 41 | 10 | | 1 | | |
| Mumps..... | | | | | | 1 |
| Observation abdomen..... | | 1 | | | | |
| Observation ears..... | 22 | 1 | | | | |
| Observation eyes..... | 65 | 42 | | | | |
| Observation glands (neck)..... | 4 | | | | | |
| Observation heart..... | 1 | | | 1 | | |

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Immigrants detained at the respective ports showing causes.—*Concluded.*

| Causes | Quebec | St. John | Halifax | Montreal | Vancouver | Victoria |
|----------------------------|--------|----------|---------|----------|-----------|----------|
| Observation infected hand | 2 | | | | | |
| Observation kidneys | 1 | | | | | |
| Observation leg | 2 | | | | | |
| Observation lungs | 22 | | | | | |
| Observation nails | 9 | 9 | | | | |
| Observation nervous system | 2 | | | | | |
| Observation scalp | 10 | 14 | | | | |
| Observation skin | 34 | 17 | | 1 | | |
| Observation throat | 2 | | | | | |
| Observation tongue | 1 | | | | | |
| Oedema | | | 1 | | | |
| Otitis media | | | 1 | | | |
| Physically defective | | | 1 | | | |
| Pneumonia | 2 | | 2 | | | |
| Prostatitis | 1 | | | | | |
| Pyrexia | | | 1 | | | |
| Rheumatism | 1 | | 1 | | | |
| Septic finger | | | 2 | | | |
| Scabies | 35 | | 6 | | | 61 |
| Sciatica | | | 1 | | | |
| Suspected appendicitis | 1 | | | | | |
| Suspected diphtheria | 3 | | | | | |
| Suspected epilepsy | 4 | | | | | |
| Suspected hysteria | 1 | | | | | |
| Suspected syphilis | 1 | | | | | |
| Suspected trachoma | 2 | | | | | |
| Syphilis | 1 | | | | | |
| Sycosis barbæ | | | 1 | | | |
| Tinea sycosis | 1 | | | | | |
| Tonsillitis | 6 | | | | | |
| Tuberculosis | | | 1 | | 3 | |
| Trachoma | 1 | | 3 | | 1 | |
| Varicose ulcer | | | 1 | | | |
| Totals | 430 | 97 | 63 | 4 | 21 | 78 |

DETAINED IMMIGRANTS SUBSEQUENTLY RELEASED AS EITHER CURED OR NEGATIVE

| | |
|-----------|-----|
| Quebec | 194 |
| St. John | 72 |
| Halifax | 46 |
| Montreal | 4 |
| Vancouver | 20 |
| Victoria | 77 |
| Total | 316 |

IMMIGRANTS CERTIFIED UNDER THE SEVERAL SUBSECTIONS OF SECTION 3 OF THE IMMIGRATION ACT, SHOWING DISABILITY.

SUBSECTION (A)—MENTAL DISEASES AND DEFECTS

| Disability | Quebec | St. John | Halifax | North Sydney | Victoria |
|-------------------|--------|----------|---------|--------------|----------|
| Idiocy | | | 1 | | |
| Imbecility | | 1 | | | |
| Feeble-mindedness | 9 | 3 | 5 | 1 | |
| Epilepsy | 2 | | | | |
| Insanity | 8 | 2 | | | 1 |
| Totals | 19 | 6 | 6 | 1 | 1 |

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SUBSECTION (B)—LOATHSOME AND CONTAGIOUS DISEASES

| Diseases | Quebec | St. John | Halifax | North Sydney | Vancouver |
|-----------------------------|--------|----------|---------|-----------------|-----------|
| Gonorrhoea..... | 3 | | | | |
| Pott's disease..... | 1 | | | | |
| Ringworm of face..... | 1 | | | | |
| Ringworm of nails..... | 2 | 4 | | | |
| Ringworm of scalp..... | 3 | 1 | | | |
| Sycosis barbae..... | 3 | | 1 | | |
| Scalp, favus of..... | | 2 | | | |
| Trachoma..... | 31 | 13 | 3 | | 1 |
| Tubercular peritonitis..... | 1 | | | | |
| Tuberculosis..... | 2 | | 1 | | 3 |
| Veneral diseases..... | 2 | | 1 | 1 | |
| Totals..... | 49 | 21 | 6 | 1 | 4 |

SUBSECTION (C)—PHYSICALLY DEFECTIVE

| Defects | Quebec | St. John | Halifax |
|--------------------------------------|--------|----------|---------|
| Amputated limb..... | | 7 | |
| Anæmia..... | 4 | 2 | 1 |
| Ankylosis..... | | 1 | 3 |
| Asthma..... | 4 | | |
| Arthritis..... | 2 | 1 | |
| Blindness..... | 4 | | 1 |
| Blepharitis..... | 1 | | |
| Blue disease..... | 2 | | |
| Bright's disease..... | 1 | | |
| Bronchitis, chronic..... | 4 | | 1 |
| Bursitis patellæ..... | 2 | | |
| Cerebral hæmorrhage..... | 1 | | |
| Cervical glands enlarged..... | 3 | | |
| Club foot..... | 6 | | |
| Cleft palate..... | 6 | | 1 |
| Curvature of spine..... | | | 4 |
| Cystitis..... | | | 1 |
| Deafness..... | 101 | 8 | 1 |
| Defective breathing..... | 2 | 2 | |
| Deaf and dumb..... | 7 | 1 | |
| Defective vision..... | 39 | 20 | 2 |
| Dislocated hip..... | | 1 | |
| Dum oness..... | 2 | 1 | |
| Dwarfism..... | | | 1 |
| Eczema..... | 1 | | |
| Facial paralysis..... | 1 | | 1 |
| Fracture of arm..... | 1 | | |
| Fracture of leg..... | 1 | | |
| General debility..... | 4 | 5 | 3 |
| Gastro enteritis..... | 1 | | |
| Goitre..... | 4 | 2 | 2 |
| Hernia..... | 18 | 2 | 13 |
| Hydrocele..... | 1 | | |
| Impaired members..... | | 25 | 10 |
| Impediment of speech..... | 1 | 1 | 1 |
| Kyphosis and Scoliosis..... | 26 | | |
| Loss of function of member..... | 164 | | |
| Metrorrhœa..... | 1 | | |
| Neurasthenia..... | | | 2 |
| Oedema..... | | | 1 |
| Otitis media..... | 1 | | |
| Paralysis (partial or complete)..... | 10 | 2 | |
| Paralysis agitans..... | 3 | | |
| Premature senility..... | 24 | | |
| Pulmonary empysema..... | 1 | | |
| Psoriasis..... | 1 | | |
| Rheumatism, chronic..... | 11 | | 1 |

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SUBSECTION (C)—PHYSICALLY DEFECTIVE—*Concluded*

| Defects | Quebec | St. John | Halifax |
|--------------------------------|--------|----------|---------|
| Rickets..... | 3 | | |
| Sclerosis..... | | 1 | 1 |
| Sciatica..... | 1 | | |
| Senility..... | | 18 | 62 |
| Sleeping sickness..... | 1 | | |
| Soft chancre..... | 1 | | |
| Valvular disease of heart..... | 18 | 4 | 4 |
| Varicocele..... | 1 | | |
| Varicose ulcer..... | 1 | | 1 |
| Varicose veins..... | 1 | | 1 |
| Totals..... | 491 | 104 | 118 |

SUBSECTIONS (D), (K), (L) AND (M)

Quebec... 17 North Sydney... 1

IMMIGRANTS RECORDED FOR MINOR DEFECTS

| | |
|---------------|-------|
| Quebec..... | \$28 |
| St. John..... | 97 |
| Halifax..... | 120 |
| Montreal..... | 2 |
| Total..... | 1,047 |

(3) FOOD AND DRUG LABORATORIES

The most outstanding feature for the year is the repeal of the Adulteration Act, (chapter 133, Revised Statutes of 1906), by the enactment of the Food and Drugs Act, 1920, assented to on June 16, 1920.

It may be well to indicate the principal points of difference between the Acts above named. References where given have regard to the Food and Drugs Act, 1920.

(1) Inspection of fertilizers and cattle feeds, being covered by special legislation, is no longer included in the Act.

(2) The Examining Board is done away with, its functions being transferred by the Civil Service Act to the Civil Service Commission.

(3) Distinction is made between adulteration and misbranding. (Sections 3, 4 and 5).

(4) Current revisions of the pharmacopœias are recognized as drug standards.

(5) Unless another authority is explicitly stated, the definition of the British Pharmacopœia governs drug quality.

(6) The title "Dominion Analyst" is recognized. (Section 2 (b).)

(7) Government assumes no responsibility in the appointment of analysts by municipalities.

(8) The inspectoral service is organized.

(9) Definitions and standards which were included in the Adulteration Act are now covered by regulations. (Sections 14 and 15).

(10) Regulations affecting labels may be established. (Section 14, 1 (b).)

(11) Fuller protection is given to the vendor by section 17.

(12) Inspectors are salaried and may not claim a moiety of penalties as formerly.

(13) Conditions are defined under which private initiation of actions may be instituted. (Section 10).

(14) The Governor in Council is given extended powers to make regulations. (Sections 14 and 15).

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(15) Schedules under the Adulteration Act are discontinued and their place taken by regulations.

(16) Inspectors are given increased power to prevent importation of fraudulent material. (Section 7 (3).)

The Commercial Feeding Stuffs Act of 1909 was repealed by the Feeding Stuffs Act, chapter 47, 10-11 George V, and the administration of this Act is placed in the hands of the Minister of Agriculture. This Act came into effect by proclamation on January 1, 1921.

Administration of the Fertilizers Act passes into the hands of the Department of Agriculture on the first day of April, 1921. (P.C. 1297).

Standards for foods, originally established under section 26 of the Adulteration Act, were revised and consolidated under authority of the Food and Drugs Act and have been published as Order in Council of December 13, 1920. Standard for ginger was legalized by Order in Council, March 4, 1921.

Comprehensive work has been done in connection with the under-mentioned commodities:—

| | | |
|-----------------------------------|---------|-----|
| Baking powder..... | Samples | 353 |
| Black and white pepper..... | " | 753 |
| Ice-cream..... | " | 201 |
| Infants' and invalids' foods..... | " | 57 |

The following occasional work has been done, and reported to the department:—

| | | | |
|--|-----|-----------------------------|-----|
| Acid phosphate..... | 1 | Invisible ink..... | 1 |
| Alcohol..... | 6 | Jams..... | 10 |
| Almond Extract..... | 2 | Lard..... | 1 |
| Apple juice..... | 1 | Maltena..... | 1 |
| Arsenic as denaturant..... | 1 | Malt flour..... | 2 |
| Arsenic in cans for canning foods..... | 1 | Maple syrup..... | 37 |
| Baking powder..... | 81 | Maple sugar..... | 31 |
| Bread..... | 1 | Maple butter..... | 2 |
| Bead oil..... | 1 | Maple products..... | 6 |
| Beer..... | 17 | Meat..... | 1 |
| Beans..... | 78 | Methyl hydrate grade 1..... | 1 |
| Biscuits..... | 2 | Milk..... | 59 |
| Butter..... | 276 | Mineral oil..... | 1 |
| Candied fruit..... | 1 | Mineral water..... | 3 |
| Candy..... | 1 | Molasses..... | 7 |
| Canned corn..... | 1 | Mushrooms..... | 1 |
| Carnol..... | 1 | Mustard..... | 2 |
| Cheese..... | 29 | Oils..... | 1 |
| Cherries..... | 4 | Oleomargarine..... | 5 |
| Cloves..... | 1 | Olive oil..... | 5 |
| Cod liver oil..... | 1 | Paints..... | 5 |
| Corned beef..... | 1 | Pellote bean..... | 1 |
| Cocoa butter..... | 1 | Pepper..... | 12 |
| Coffee..... | 3 | Methylated spirit..... | 1 |
| Colouring..... | 1 | Phosphate of lime..... | 6 |
| Cream of tartar..... | 1 | Pickles..... | 1 |
| Crystal sucrose..... | 2 | Pile ointment..... | 1 |
| Currants..... | 1 | Pepper, white..... | 2 |
| Disinfectant..... | 1 | Purifier of fats..... | 1 |
| Dried fruit..... | 1 | Polish paste..... | 3 |
| Drugs..... | 19 | Pork and beans..... | 1 |
| Dye..... | 1 | Pyorrhea Remedy..... | 1 |
| Egg albumen..... | 27 | Salad oil..... | 3 |
| Epsom salts..... | 1 | Sausages..... | 58 |
| Extracts..... | 2 | Soap..... | 28 |
| Fats..... | 1 | Sugar..... | 40 |
| Feeds..... | 3 | Summer drinks..... | 353 |
| Fertilizers..... | 400 | Syrup..... | 1 |
| Fir wine..... | 1 | Table sauce..... | 1 |
| Flour..... | 10 | Tanlac..... | 3 |
| Floor wax..... | 1 | Type metals..... | 9 |
| Ginger..... | 2 | Vanilla extract..... | 3 |
| Gluten flour..... | 2 | Vegetable compound..... | 1 |
| Goitre cure..... | 1 | Vinegar..... | 23 |
| Grape juice..... | 1 | Vin Tonique Senator..... | 3 |
| Herrings..... | 1 | Vin Tonique Bonaparte..... | 1 |
| Hervay preparation..... | 4 | Water..... | 11 |
| Horseradish..... | 1 | Wine..... | 7 |
| Honey..... | 68 | | |

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The total number of prosecutions entered for violation of the Act during the year is 272. Of this number 248 have been completed, leaving 24 in progress.

DETAILS OF PROSECUTIONS

| | |
|--------------------------|-------|
| Acid phosphate.. . . . | 1 |
| Baking powder.. . . . | 49 |
| Butter.. . . . | 12 |
| Camphorated oil.. . . . | 7 |
| Cloves.. . . . | 1 |
| Coffee.. . . . | 1 |
| Crystal sucrose.. . . . | 1 |
| Feeding stuffs.. . . . | 1 |
| Headache powder.. . . . | 1 |
| Honey.. . . . | 9 |
| Maple sugar.. . . . | 4 |
| Maple syrup.. . . . | 3 |
| Milk.. . . . | 30 |
| Mineral water.. . . . | 2 |
| Molasses.. . . . | 2 |
| Patent medicines.. . . . | 4 |
| Pepper.. . . . | 65 |
| Refusal to sell.. . . . | 1 |
| Salad oil.. . . . | 2 |
| Sausages.. . . . | 30 |
| Sausage flour.. . . . | 3 |
| Vinegar.. . . . | 43 |
| | <hr/> |
| | 272 |

RESUME

| | |
|--|-------|
| Incomplete.. . . . | 24 |
| Convictions.. . . . | 61 |
| Voluntary payment of fines and costs.. . . . | 135 |
| Dismissed by court.. . . . | 8 |
| Withdrawn.. . . . | 44 |
| | <hr/> |
| Total.. . . . | 272 |

The following reports indicate the work performed at Halifax, Winnipeg and Vancouver sub-laboratories.

HALIFAX

| Samples analyzed | Collected by Inspectors |
|-------------------------------------|----------------------------|
| Fertilizers, 1920.. . . . | 62 |
| Fertilizers, 1921.. . . . | 6 |
| Ice cream.. . . . | 50 |
| Soft drinks.. . . . | 101 |
| Fruit syrups, cordials, etc.. . . . | 29 |
| Lemon flavouring extract.. . . . | 13 |
| Vanilla flavouring extract.. . . . | 3 |
| Lime juice.. . . . | 1 |
| Vinegar.. . . . | 6 |
| Maple sugar.. . . . | 8 |
| Maple syrup.. . . . | 2 |
| Olive oil.. . . . | 3 |
| Maize oil.. . . . | 1 |
| Drugs.. . . . | 5 |
| | <hr/> |
| | 290 |

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SAMPLES, SPECIAL

| | |
|--|-------|
| Examination of imports— | |
| Oriental beans.. . . . | 9 |
| Sugar.. . . . | 5 |
| Corn syrup.. . . . | 1 |
| Beer and ale for export.. . . . | 18 |
| Butter for Department of Agriculture.. . . . | 2 |
| Evaporated milk, Department of Militia and Defence.. . . . | 1 |
| Beer wort, Department of Militia and Defence.. . . . | 1 |
| Vanilla extract.. . . . | 3 |
| Lemon extract.. . . . | 1 |
| Corn meal.. . . . | 1 |
| Lard.. . . . | 1 |
| Boiler water.. . . . | 1 |
| Fertilizers.. . . . | 2 |
| | <hr/> |
| | 46 |
| Total samples.. . . . | 336 |

Seizures made—

October, 1920—Lemon Essence from Wentzell's, Ltd., Halifax. Destroyed by order of Minister, December, 1920.

October, 1920—Malt vinegar (artificial) from Jo-Ho Company, Dartmouth. Destroyed by order of Minister, December, 1920.

WINNIPEG

INSPECTOR'S SAMPLES

| | |
|----------------------------------|-------|
| Baking powder.. . . . | 7 |
| Camphorated oil.. . . . | 7 |
| Cloves, ground.. . . . | 26 |
| Coffee, ground.. . . . | 14 |
| Cream tartar.. . . . | 2 |
| Fertilizers.. . . . | 60 |
| Ginger, ground.. . . . | 9 |
| Honey, strained.. . . . | 2 |
| Ice cream.. . . . | 70 |
| Jam.. . . . | 1 |
| Maple sugar.. . . . | 6 |
| Maple syrup.. . . . | 3 |
| Nutmeg, ground.. . . . | 1 |
| Olive oil.. . . . | 2 |
| Pepper, black.. . . . | 37 |
| Pepper, white.. . . . | 1 |
| Sage, ground.. . . . | 1 |
| Spirits of nitrous ether.. . . . | 5 |
| Sterilized milk.. . . . | 1 |
| Vinegar.. . . . | 50 |
| Wines and cordials.. . . . | 30 |
| | <hr/> |
| | 335 |

OCCASIONAL SAMPLES

| | |
|---|----|
| Samples for alcohol determination.. . . . | 43 |
| Black pepper.. . . . | 1 |
| Baking powder.. . . . | 1 |
| Calf meal.. . . . | 1 |
| Carbon bisulphide.. . . . | 1 |
| Coffee compound.. . . . | 1 |
| Cream tartar.. . . . | 1 |
| Honey.. . . . | 1 |
| Indigestion powder.. . . . | 1 |
| Jam.. . . . | 2 |
| Maple syrup.. . . . | 1 |
| Milk.. . . . | 2 |
| Vinegar.. . . . | 2 |

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| | |
|--|-------|
| Samples in customs bond— | |
| Beans..... | 27 |
| Egg albumen..... | 2 |
| Sugar, granulated..... | 10 |
| Evaporated apples..... | 1 |
| Butter, Department of Agriculture..... | 17 |
| Washes, Inland Revenue..... | 33 |
| Narcotic drug samples..... | 8 |
| | <hr/> |
| | 156 |
| Total samples..... | |
| | <hr/> |
| | 491 |

VANCOUVER

COLLECTIONS

Description

| | |
|----------------------|-------|
| Fertilizers..... | 38 |
| Sterilized milk..... | 29 |
| Ice cream..... | 32 |
| Beverages..... | 81 |
| | <hr/> |
| | 180 |
| Special samples..... | 624 |
| | <hr/> |
| Total..... | 804 |

Samples, Special

| | | | |
|-------------------------|-----|------------------------|-----|
| Apples, evaporated..... | 19 | Morphine..... | 5 |
| Baking powder..... | 2 | Narcotics..... | 4 |
| Beans..... | 393 | Olive oil..... | 3 |
| Beer..... | 30 | Opium..... | 27 |
| Boric acid..... | 1 | Pills, Chinese..... | 1 |
| Butter..... | 9 | Pineapple, canned..... | 2 |
| Camphorated oil..... | 21 | Prussic acid..... | 1 |
| Cocaine..... | 7 | Rice bran..... | 1 |
| Cocoa..... | 1 | Rice shorts..... | 1 |
| Coffee..... | 1 | Sodium benzoate..... | 1 |
| Corn, canned..... | 1 | Soils..... | 9 |
| Egg, dried albumen..... | 7 | Stout..... | 1 |
| Egg, dried yolk..... | 2 | Sugar, refined..... | 21 |
| Egg, dried whole..... | 13 | Syrup..... | 1 |
| Egg, liquid yolk..... | 2 | Vanilla extract..... | 2 |
| Honey..... | 6 | Vinegar..... | 8 |
| Iodine tincture..... | 1 | Walnuts..... | 1 |
| Lemon extract..... | 2 | Water..... | 2 |
| Lemon juice..... | 1 | Wheat..... | 1 |
| Milk, evaporated..... | 2 | Wheat, roasted..... | 6 |
| Milk, sterilized..... | 3 | Wine..... | 1 |
| Milk, whole..... | 1 | | |
| Total..... | | | 624 |

Progress has been made in the establishment and equipping of a fourth sub-laboratory at Montreal; and it is expected that this sub-laboratory will be put into commission in the course of a few months.

(4) OPIUM AND NARCOTIC DRUGS

During the early part of the year 1920 a system was inaugurated in the branch for controlling the imports, exports, manufacture, sale and distribution of opium, morphine, heroin, and cocaine, etc., through the regular channels, viz., the wholesale and manufacturing druggists, retail druggists, dentists, veterinary surgeons and physicians.

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All licenses for narcotics granted to importers are dealt with on their merits, and the quantity allowed to be imported depends altogether on the size and nature of the applicant's business, and the demand he can show he has for narcotics for legitimate purposes. All wholesale druggists and importers are required to furnish to the Department at the end of each calendar month, a statement of their sales of these drugs to the various retail druggists, dentists, veterinary surgeons and physicians, and the department has therefore at all times a very accurate record of the quantity of these drugs received by all retail druggists, physicians, veterinary surgeons and dentists in Canada. All retail druggists are also required to furnish to the department a statement of their sales of narcotics on prescription, etc.

The following table shows the imports of narcotics for the twelve months ended March 31, for the years 1919, 1920 and 1921:—

| | |
|------------|-------------|
| Cocaine— | |
| 1919.. | 12,333 ozs. |
| 1920.. | 6,968 " |
| 1921.. | 3,310 " |
| Morphine— | |
| 1919.. | 30,087 " |
| 1920.. | 28,198 " |
| 1921.. | 12,124 " |
| Gum opium— | |
| 1919.. | 34,263 lbs. |
| 1920.. | 13,626 " |
| 1921.. | 3,953 " |

Since the amendment to the Opium and Narcotic Drug Act, 10-11 George V, Chapter 31, assented to June 16, 1920, became effective, the following licenses have been issued up to the end of the fiscal year ended March 31, 1921:—

| | |
|--|-----|
| Export licenses.. | 8 |
| Import licenses.. | 92 |
| Retail druggists' licenses to manufacture.. | 125 |
| Wholesale druggists' and manufacturers' licenses.. | 209 |

The total amount of fees collected from all licenses issued up to March 31, 1921, was \$4,765.

Prosecutions conducted by the Royal Canadian Mounted Police on behalf of the Department of Health, against persons found guilty of offences against the Opium and Narcotic Drug Act during the year ended March 31, 1921, are as follows:—

| | |
|---|-----|
| Number of persons convicted.. | 299 |
| Doctors.. | 21 |
| Veterinary surgeons.. | 1 |
| Druggists.. | 17 |
| Illicit dealers (Chinamen).. | 209 |
| Illicit dealers (other than Chinamen).. | 51 |

In connection with the amount of fines imposed for infractions of the Act, it may be explained that in a great many cases persons convicted were unable to pay the fine imposed, and were, therefore, sentenced to serve a term of imprisonment.

It should be mentioned that many persons found guilty of infractions against the Act were sentenced to terms of imprisonment without the option of a fine.

In connection with the enforcement of the Opium and Narcotic Drug Act, it might be further stated that in addition to the large reduction in the amount of narcotics imported through the regular channels, the department has succeeded, in co-operation with the Department of Customs, and the officers of the Royal Canadian Mounted Police, in intercepting very large quantities of these drugs which were being imported into Canada by the underground channels.

Order in Council P.C. 3235 of the 8th of June, 1921, was passed, extending the time limit for the disposal of drug packages and labels (which had not printed thereon the warning as provided under subsection 4-a of section 5-a of the Act) which were

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in the possession of the manufacturers or had been contracted for prior to September 20, 1920, on which date the amendments to the Act which were assented to on the 16th of June, 1920, were proclaimed in the *Canada Gazette* and became effective.

Through the amendments to the Act referred to, the department has succeeded in having removed from the market a number of preparations such as soothing syrups, etc., which contain large quantities of opium and morphine, and were being manufactured and sold unrestricted, which preparations were designed ostensibly for administration to very young children.

(5) PROPRIETARY OR PATENT MEDICINES

The activities of the Proprietary or Patent Medicines Branch during the fiscal year ended March 31, 1921, covered registering, licensing and relicensing preparations, comprising all classes of medicines for the internal and external use of man, save those designed for venereal diseases, or those which appeared to be capable of being used for illicit purposes. During the period referred to, 2,602 preparations were registered and licensed, and, approximately, 1,900 relicensed.

When the Proprietary or Patent Medicine Act of 1919 came into force many thousands of packages of preparations were then on the market ready for delivery to the consumer, and in order to avoid the loss of these goods, it was necessary to pass an Order in Council in September, 1920, legalizing the sale until January 1, 1924, of medicines for the internal use of man, bearing a registration number granted under the Act of 1908, and preparations for external use which were not registered under the new law, until the same date, provided that in the latter case a stamp was affixed to each such package. Over 4,000,000 stamps were used for such medicines.

The schedule to the Act was also revised in September, 1920, by Order in Council No. 2039, deleting certain drugs and adding a number of others.

During the year numerous complaints were received from our inspectors and others interested respecting irregularities in the sale and labelling of medicines. Consequent to these complaints, warnings were issued to the offenders which resulted in immediate correction or the cessation of these irregularities. Several firms were prosecuted for selling alcoholic preparations insufficiently medicated, and our inspectors are constantly seizing medicines which are subject to this law and not registered and licensed as required thereby.

It may be well here to explain that not all medicines for which extravagant claims and statements are made in advertisements, are subject to the provisions of The Proprietary or Patent Medicine Act, inasmuch as most of these advertisers have a statement of composition printed upon the labels and wrappers of their preparations, and are thus not registerable under this Act.

(6) MARINE HOSPITALS SERVICE

Under the provisions of Part V, Canada Shipping Act (Sick and Distressed Mariners), dues of two cents per ton, registered tonnage, are levied on every vessel entering any port in the provinces of Quebec, New Brunswick, Nova Scotia, Prince Edward Island and British Columbia. These dues are collectible three times during each calendar year.

The officers and seamen of fishing vessels not registered in Canada do not pay sick mariners' dues, nor participate in the benefits accruing therefrom, but such vessels registered in Canada may pay dues and participate in the benefits.

The Act does not apply to Ontario; therefore, no dues are collected from that province.

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In consideration of the payment of these dues, sick and distressed mariners belonging to vessels on which said duty has been paid are entitled to gratuitous treatment, and the expenditure incurred for such treatment is defrayed out of the appropriation voted by Parliament for that purpose.

During the year 1920-21, sick and distressed mariners have been treated at the following hospitals:—

Province of Quebec—

Montreal—

Montreal General Hospital.
Notre Dame Hospital.
Royal Victoria Hospital.
Hôtel Dieu and St. Paul Hospital (Contagious Diseases).
Alexandra Hospital.

Quebec—

Jeffrey Hale Hospital.
Hôtel Dieu Hospital.
Three Rivers—St. Joseph's Hospital.
Chicoutimi—Hôtel Dieu.
Sorel—Sorel General Hospital.
St. Johns—St. John Hospital.
Murray Bay—St. Joseph's Hospital.

Province of Nova Scotia—

Marine hospitals were maintained at Louisburg, Lunenburg, and Sydney. The Louisburg hospital was closed on October 1, 1920.

Halifax—

Victoria General Hospital.
City Health Board Hospital (Contagious Diseases).
Pictou—Pictou Cottage Hospital.
North Sydney—Hamilton Memorial Hospital.
New Glasgow—Aberdeen Hospital.
Antigonish—St. Martha's Hospital.
Windsor—Payzant Memorial Hospital.
Amherst—Highland View Hospital.
Yarmouth—Yarmouth Hospital.
Springhill—Springhill Cottage Hospital.
Kentville—Kentville Sanatorium (Tubercular cases).

Province of New Brunswick—

A marine hospital is maintained at Douglastown.

St. John—

General Public Hospital.
City Health Board Hospital (Contagious Diseases).
Moncton—Moncton Hospital.
Campbellton—Hôtel Dieu Hospital.
Bathurst—James Dunn Hospital.
St. Stephens—Chipman Memorial Hospital.
Fredericton—General Hospital.

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Province of Prince Edward Island—

Charlottetown—

Charlottetown Hospital.

P.E.I. Hospital.

City Hospital.

Summerside—Prince County Hospital.

Province of British Columbia—

Victoria—

St. Joseph's Hospital.

Isolation Hospital.

Vancouver—St. Paul's Hospital.

Prince Rupert—Prince Rupert General Hospital.

New Westminster—

St. Mary's Hospital.

Royal Columbian Hospital.

Nanaimo—Nanaimo Hospital.

Ladysmith—Ladysmith Hospital.

Chemanius—Chemanius Hospital.

Union Bay—Cumberland Hospital.

Anyox—General Hospital.

Ocean Falls—Ocean Falls Hospital.

Where there is no marine or designated hospital, the collector of customs makes provision for the treatment of sick mariners at private residences or public boarding houses.

TABLE SHOWING THE NUMBER OF SEAMEN TREATED AT EACH PORT.

NOVA SCOTIA.

| Port. | No. of Seamen. | Port | No. of Seamen. |
|---------------------------------------|-------------------|--------------------------------|-------------------|
| Advocate Harbour.. . . . | 3 | Louisburg.. . . . | 8 |
| Annapolis Royal.. . . . | .. | Lunenburg.. . . . | 13 |
| Antigonish.. . . . | 2 | Mahone Bay.. . . . | 10 |
| Apple River.. . . . | 1 | Meteghan.. . . . | 2 |
| Arichat.. . . . | 8 | North Sydney.. . . . | 177 |
| Baddeck.. . . . | 1 | North Sydney Institute.. . . . | .. |
| Barrington.. . . . | 2 | Parrshoro.. . . . | 5 |
| Barton.. . . . | .. | Pictou.. . . . | 26 |
| Bear River.. . . . | 1 | Port Greville.. . . . | 1 |
| Bridgetown.. . . . | 2 | Port Hawkesbury, etc.. . . . | 34 |
| Bridgewater.. . . . | 3 | Port Latour.. . . . | 1 |
| Canso.. . . . | 21 | Port Morien.. . . . | 4 |
| Cheticamp.. . . . | 37 | Pubnico.. . . . | 6 |
| Clark's Harbour.. . . . | 2 | Riverport.. . . . | 1 |
| Digby.. . . . | 24 | Sandy Cove.. . . . | 5 |
| Freeport, Westport and Tiverton.. . . | 4 | Sheet Harbour.. . . . | 2 |
| Glace Bay.. . . . | .. | Shelburne.. . . . | 6 |
| Halifax: | | Spry Bay.. . . . | 1 |
| Victoria General Hosp.. . . . | 158 | St. Peters.. . . . | 4 |
| City Hospital.. . . . | 30 | Sydney.. . . . | 117 |
| Hansport.. . . . | 5 | Wallace.. . . . | 3 |
| Ingramport.. . . . | 3 | Weymouth.. . . . | 1 |
| Joggin Mines.. . . . | 1 | Windsor.. . . . | 17 |
| Kingsport.. . . . | 1 | Wolfville.. . . . | 1 |
| La Have.. . . . | 14 | Yarmouth.. . . . | 96 |
| Liscomb.. . . . | 2 | | |
| Liverpool.. . . . | 32 | Total.. . . . | 922 |
| Lockeport.. . . . | 24 | | |

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TABLE SHOWING THE NUMBER OF SEAMEN TREATED AT EACH PORT.—*Concluded.*

NEW BRUNSWICK.

| Port | No. of Seamen. | Port | No. of Seamen. |
|-------------------------|-------------------|-------------------------------|-------------------|
| Albert and Alma.. . . . | 11 | Shediac.. . . . | 1 |
| Bathurst.. . . . | 13 | Shippegan.. . . . | 21 |
| Beaver Harbour.. . . . | 3 | St. Georges.. . . . | 3 |
| Campbellton.. . . . | 30 | St. John: | |
| Cape Tormentine.. . . . | .. | General Public Hosp.. . . . | 179 |
| Carquet.. . . . | 17 | County Hospital.. . . . | 1 |
| Dalhousie.. . . . | 9 | St. John Seamen's Soc.. . . . | .. |
| Douglastown.. . . . | 10 | St. Martins.. . . . | 4 |
| Grand Harbour.. . . . | 4 | St. Stephens.. . . . | 2 |
| Hillsboro.. . . . | .. | | |
| Moncton.. . . . | 1 | Total.. . . . | 315 |
| North Head.. . . . | 5 | | |
| Richibucto.. . . . | 1 | | |

PRINCE EDWARD ISLAND.

| | | | |
|----------------------------|----|------------------------|----|
| Alberton.. . . . | 1 | Murray Harbour.. . . . | 3 |
| Cardigan.. . . . | 1 | Rustico.. . . . | 2 |
| Charlottetown: | | Souris.. . . . | 22 |
| Charlottetown Hosp.. . . . | 3 | Summerside.. . . . | 6 |
| P.E.I. Hospital.. . . . | 7 | Tignish.. . . . | 1 |
| City Hospital.. . . . | 1 | | |
| Georgetown.. . . . | 4 | Total.. . . . | 61 |
| Montague.. . . . | 10 | | |

QUEBEC.

| | | | |
|--------------------------------|-----|--------------------------------|-----|
| Chicoutimi.. . . . | 3 | Paspebiac.. . . . | 5 |
| Gaspé.. . . . | 6 | Quebec: | |
| Lévis.. . . . | 4 | Hotel-Dieu.. . . . | 21 |
| Magdalene Islands.. . . . | 9 | Jeffery Hale's Hosp.. . . . | 53 |
| Matane.. . . . | 2 | Catholic Sailor's Club.. . . . | .. |
| Montmagny.. . . . | 1 | Rimouski.. . . . | 12 |
| Montreal: | | Seven Islands.. . . . | 1 |
| General Hospital.. . . . | 313 | Sorel.. . . . | 5 |
| Notre Dame Hospital.. . . . | 177 | St. Johns.. . . . | 12 |
| Alexander Hospital.. . . . | 4 | Three Rivers.. . . . | 6 |
| Royal Victoria.. . . . | 10 | | |
| Seamen's Institute.. . . . | .. | Total.. . . . | 644 |
| Catholic Sailor's Club.. . . . | .. | | |

BRITISH COLUMBIA.

| | | | |
|-------------------------|----|-------------------------------|-----|
| Anyox.. . . . | 2 | Union Bay.. . . . | 9 |
| Bella-Bella.. . . . | 1 | Vancouver: | |
| Chemainus.. . . . | 1 | St. Paul's Hospital.. . . . | 121 |
| Ladysmith.. . . . | 1 | Sailor's Club.. . . . | .. |
| Nanaimo.. . . . | 49 | Victoria: | |
| New Westminster.. . . . | 1 | St. Joseph's Hospital.. . . . | 58 |
| Ocean Falls.. . . . | 10 | Isolation.. . . . | 3 |
| Port Alberni.. . . . | 3 | | |
| Port Alice.. . . . | 4 | Total.. . . . | 295 |
| Prince Rupert.. . . . | 28 | | |
| Quatsino.. . . . | 4 | | |

(7) VENEREAL DISEASE CONTROL

The following provinces have taken part in the Dominion campaign against venereal disease, during the twelve months ended March 31, 1921: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia.

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The sum of \$200,000 was voted by the Dominion Government for the work of venereal disease control and expended as follows:—

| | |
|---|--------------|
| Grants to— | |
| British Columbia.. . . . | \$ 14,628 19 |
| Alberta.. . . . | 11,979 62 |
| Saskatchewan.. . . . | 15,361 63 |
| Manitoba.. . . . | 12,611 20 |
| Ontario.. . . . | 57,473 68 |
| Quebec.. . . . | 47,388 80 |
| Nova Scotia.. . . . | 10,573 86 |
| | <hr/> |
| Canadian National Council for combating V.D.. . . . | \$170,016 98 |
| Printing.. . . . | 10,000 00 |
| | 1,587 84 |
| | <hr/> |
| | \$181,604 82 |

In accordance with the agreement entered into between the Dominion Government and the provinces accepting these grants, free clinics for the treatment of venereal diseases, conducted by specialists and with adequate facilities, have been in operation during the year in all the provinces taking part in the campaign.

Laboratories working in conjunction with the clinics have been established in all these provinces, and free treatment in institutions and free hospital accommodation have also been provided. Follow-up work is being done.

The chief of the division inspected all clinics and laboratories, and reported that he found them modern in every respect, and efficiently conducted.

The monthly reports received from the clinics, institutions and laboratories, and tabulated by this department, indicate that very good and useful work is being done.

Work of prevention, consisting of lectures, films and educational literature, has been conducted by this department, the provincial authorities and voluntary organizations.

In conjunction with the Division of Publicity, the Division of Venereal Disease Control has prepared in English and French, eight booklets on venereal disease, five for the medical profession, scientists, teachers, etc., and three for issue to the general public (see report of Division of Publicity).

A special pamphlet for seamen is now being prepared.

During the twelve months under review, this department has taken an active part in the control of venereal diseases, and has aided the provinces in every possible way, for the prosecution of the work of prevention and cure of these diseases.

(8) DIVISION OF PUBLICITY

During the year under review ten publications were prepared and issued in English and French. These were:—

The Canadian Mother's Book.

What You Should Know About Tuberculosis.

For the medical profession, scientists, teachers, etc.—

To-day's World Problem in Disease Prevention, by Dr. Stokes.

General Circular of Information Concerning Venereal Diseases.

The Wassermann Test.

Microscopic Examination.

Treatment and Diagnosis.

For the general public:—

Information for Men.

Information for Young Women.

Information for Parents.

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In the case of "The Canadian Mother's Book" the demand has been so great that it became necessary to print second and third editions. This book is intended for mothers and prospective mothers.

Through arrangements made with the provinces and other bodies, we have been able to place at the disposal of those interested, sets of lantern slides with accompanying descriptions, covering health matters. Lists of other available slides are supplied upon request.

Moving-picture films on health subjects have been exhibited for private view and when found to be of educational value, the source of supply is given to those inquiring for this method of publicity. It has been possible, in this way, to assist associations without the necessary expense of having our own films made.

A request was received from the Colonial Office for medical men for service in African Possessions and the West Indies. Information regarding these possessions was circulated through the newspapers and magazines, resulting in the appointment of three Canadian doctors to positions under the Colonial Office.

(9) DIVISION OF CHILD WELFARE

The activities of this division commenced in May, 1920.

The first work undertaken was the securing of information and publications on maternity and child welfare from all the provinces of Canada, from other parts of the British Empire and from all other civilized countries, in order that a general knowledge of the best modern standards, methods and achievements in maternal and child welfare might be acquired and that the series of these might be placed on file in the department. The approximate number of communications and publications received and studied in this way was 3,690.

It was next considered wise to prepare for our own guidance and for the assistance of others a brief statement of our plan of work, general policy, general aims and methods, so that a clear statement of the meaning of maternal and child welfare and the chief aims and objects in connection with such welfare and how these may best be attained, might be available.

As co-operation with provincial health authorities in all the provinces of the Dominion of Canada is one of the main parts of the work of this department and as invitations had been received from the above-mentioned authorities and others, visits were accordingly arranged to all the capital cities of the nine provinces and to seven other cities. Excellent co-operation was received in every case and further knowledge of the work of Child Welfare throughout Canada was acquired and disseminated.

For some considerable time many voluntary associations and private individuals interested in child welfare had determined that the most feasible plan of advancing the general interests of child welfare throughout the Dominion of Canada would be by the holding of a conference at which would be represented the greatest possible number of those interested in the work from all parts of Canada. At the request of these representatives this department consented to preside at such a conference and assisted in the organization of a Canadian voluntary child welfare body. About 200 representatives attended the meeting held in October, 1920, the outcome being the formation of The National Council of Child Welfare.

At the request of the members of the various provincial executives the department also assisted in the necessary details and further organization of this body.

It has been found that this organization has materially assisted in the co-ordinating of the work of voluntary associations and enabling the workers to become acquainted and to learn the aims and methods of child welfare in the different parts of the Dominion.

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Original Canadian publications on subjects connected with maternal and child welfare have been constantly asked for from the day that this division was organized and the preparations of a book for mothers and a series of pamphlets on maternal and child welfare undertaken immediately.

"The Canadian Mother's Book" was written in August, 1920; revised in September, 1920, published March 3, 1921, and 12,000 copies have been distributed up to March 31, 1921.

The preparation of fourteen pamphlets to be known as "The Little Blue Books—Home Series" was commenced in December, 1920, and submitted for publication in March, 1921. This series will be published in English and French under the following titles:—

1. Good Wishes for you from Canada.
2. How to Build the Canadian House.
3. How to make our Canadian Home.
4. How to make Outpost Homes in Canada.
5. Canadians Need Milk.
6. How we Cook in Canada.
7. How to Manage Housework in Canada.
8. How to take care of Mother.
9. How to take care of the Family.
10. How to take care of the Baby.
11. How to take care of the Children.
12. Household Cost Accounting in Canada.
13. How to take care of Household Waste.
14. How to Avoid Accidents and Give First Aid.

(10) HOUSING BRANCH

Under the provisions of Order in Council, P.C. 2997, dated December 3, 1918, the sum of \$25,000,000 was allotted for housing loans to the provinces.

The unexpended amount available, as of date March 31, 1921, was \$10,455,000.

Acts providing for the acceptance of the loan and the erection of dwelling houses have been enacted by eight of the Provincial Governments, and are as follows:—

NOVA SCOTIA HOUSING ACT. CHAPTER 4, 1919.

Prince Edward Island.—An Act to provide for the erection of dwelling houses. Chapter 12, 1919.

New Brunswick.—An Act to provide for better housing. Chapter 56, 1919.

Quebec.—An Act to provide for the construction of workmen's dwellings and for advances to municipalities. Chapter 10, 1919; and amended Act approved by Order in Council 1090, May 19, 1920.

Ontario.—An Act to provide for the erection of dwelling houses, 1919; and amended Act passed in 1920 and referred to in report of Director of Housing of Ontario, p. 1.

The Municipal Housing Act, 1920, giving authority to Councils to issue their own debentures for housing purposes.

Manitoba.—An Act respecting housing in urban municipalities, 1919. Amended Ch. 55, 1920 and Ch. 33, 1921.

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Saskatchewan.—An Act respecting housing in urban municipalities. Chapter 45, 1919.

British Columbia.—An Act to provide for better housing. Chapter 8, 1919.

The Provincial Government of Alberta has not passed an Act.

Schemes were prepared by the following provinces and approved by Order in Council following the passing of the above legislation: Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and British Columbia.

Legislation in Prince Edward Island has remained inoperative because no scheme has been prepared. Thus the position is that eight out of the nine provinces have passed Acts and seven out of these eight have prepared schemes.

Over two years have passed since the federal loan was granted and the progress made in the different provinces may be said to correspond with the activities shown in administering the Act with regard paid to the local conditions.

The amount of the federal loan actually borrowed by the provinces, as of date March 31, 1921, was \$14,545,000, and the total number of houses erected under the scheme, 3,691.

The building programme of the different provinces showed that an additional 1,496 houses were expected to be built during the following building season.

The provinces advanced to the municipalities a total sum of \$12,547,435, out of the federal loan, while the total sum allotted to the municipalities was \$19,916,503.

The applications made by the municipalities to the Provincial Governments for loans amounted to \$34,522,897.

Official reports received from the provincial housing authorities advised as follows:—

| Province | No. of municipalities that have taken action | No. of houses built | Amount of advance made |
|---------------------------|--|---------------------|------------------------|
| Ontario. | 72 | 2,344 | \$ 8,750,000 |
| Manitoba. | 18 | 525 | 1,580,000 |
| British Columbia. | 27 | 359 | 1,361,500 |
| Quebec. | 34 | 263 | 1,033,500 |
| Nova Scotia. | 6 | 93 | 600,000 |
| New Brunswick. | 14 | 107 | 1,220,000 |
| Total. | 171 | 3,691 | \$14,545,000 |

(11) PUBLIC WORKS HEALTH ACT

For the purpose of carrying out the intent of the above Act, which is administered by the Department of Health, the Dominion of Canada is divided into two sections—East and West. The Eastern section comprises the territory east of Winnipeg to the Atlantic coast. The medical inspector is Mr. C. A. L. Fisher, with headquarters at Montreal. The Western division extends from Winnipeg to the Pacific coast. The medical inspector is Dr. A. E. Clendenan, with headquarters at Edmonton, Alberta.

EASTERN DIVISION

Mr. Fisher's report for the year is quite satisfactory. Among the various plants visited were the Welland ship canal works, the Trent canal, the Canadian Pacific Railway works in the vicinity of Sudbury, Ont., the Canadian Pacific Railway and Canadian Northern Railway construction camps in northern Ontario, etc. The Welland canal works have their own hospital, but the employees injured or taken ill at the other camps are usually removed to the nearest local hospital. The health of the men and their board and housing are considered very good in all instances.

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WESTERN DIVISION

Dr. Clendenan, Inspector for the Western Division, reports a diminished volume of work compared with other years. Instead of line doctors and temporary hospitals, local resident physicians and municipal hospitals are now used. The change has brought an improvement in the nursing service and in the treatment of cases.

With the exception of the smaller contracts, the work was all inspected at least twice during the year. Amongst other construction works inspected were the Canadian Northern Railway camp for the Munson-Wayne of the Saskatoon-Calgary line, the Hanns-Medicine Hat, the Oliver-St. Paul and the Onoway-Whitecourt in Alberta, the Humboldt-Melfort in Saskatchewan and Victoria-West Coast line, the Canadian Pacific Railway camp for the Acme-Drumheller in Alberta, Rostown South for Southern Saskatchewan and for the Alberni, Great Lakes line, etc.

(12) FINANCIAL STATEMENT

STATEMENT OF EXPENDITURES FOR FISCAL YEAR 1920-21

| Service | Appropriation | | Amount Expended | | Balance Unexpended | |
|---|---------------|----|-----------------|------|--------------------|----|
| | \$ | c. | \$ | c. | \$ | c. |
| Adulteration of Food, etc..... | 90,000 | 00 | 59,859 | 72 | 30,140 | 28 |
| Proprietary or Patent Medicines..... | 10,000 | 00 | 3,875 | 01 | 6,124 | 99 |
| Housing..... | 15,000 | 00 | 9,036 | 99 | 5,963 | 01 |
| Pollution of Boundary Waters..... | 5,000 | 00 | | | 5,000 | 00 |
| Marine Hospitals..... | 85,000 | 00 | 77,545 | 60 | 7,454 | 40 |
| Quarantine, Lazarettos and Public Works Health Act..... | 262,500 | 00 | 262,498 | 11 | | 89 |
| Immigration Medical Inspection..... | 50,000 | 00 | 44,257 | 25 | 5,742 | 75 |
| Research..... | 10,000 | 00 | | | 10,000 | 00 |
| Veneral Diseases..... | 200,000 | 00 | 181,604 | 82 | 18,395 | 18 |
| Civil Government Salaries..... | 139,597 | 50 | 101,687 | 98 | 37,909 | 52 |
| Contingencies..... | 84,860 | 00 | 64,115 | 77 | 20,744 | 23 |
| Medical Research Committee (from February 1, 1921)..... | 2,245 | 56 | 1,293 | 33 | 952 | 23 |
| | 954,203 | 26 | 805,774 | 58 | 148,428 | 48 |
| Miscellaneous— | | | \$ | cts. | | |
| Provisional Bonus Allowance..... | | | 50,289 | 88 | | |
| Gratuities..... | | | 586 | 66 | | |
| Retirement Act, 1920(Superannuation No. 4)..... | | | 1,333 | 33 | | |
| Unforeseen expenses..... | | | 103 | 05 | | |
| Adjustment of salaries due to reclassification..... | | | 11,332 | 59 | | |
| | | | | | \$72,625 | 51 |

STATEMENT OF REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL YEAR ENDED
MARCH 31, 1921

| Service | Total Revenue | Refunds | Net Revenue |
|----------------------------------|------------------|----------|----------------|
| | \$ c. | \$ c. | \$ c. |
| A. Adulteration of Food..... | 11,829 95 | 195 00 | 11,634 95 |
| B. Opium and Narcotic Drugs..... | 17,238 00 | 636 00 | 16,602 00 |
| C. Feeding Stuffs..... | 123 00 | | 123 00 |
| D. Fertilizers..... | 10,302 00 | | 10,302 00 |
| E. Patent Medicines..... | 10,403 00 | 145 00 | 10,258 00 |
| F. Sick Mariners' Dues..... | 88,110 96 | 510 34 | 87,600 62 |
| Casual Revenue..... | 947 76 | | 947 76 |
| Total..... | 138,954 67 | 1,486 34 | 137,468 33 |

DEPARTMENT OF HEALTH

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"A" ADULTERATION OF FOOD REVENUE FOR 1920-21

| | Analysis | Fines and Forfeitures | Costs | Total |
|-----------------------|----------|-----------------------|----------|-----------|
| | \$ c. | \$ c. | \$ c. | \$ c. |
| Nova Scotia..... | 15 00 | 25 00 | 9 00 | 49 00 |
| New Brunswick..... | 41 00 | 25 00 | 9 00 | 75 00 |
| Quebec..... | 162 00 | 3,634 00 | 1,299 10 | 5,095 10 |
| Ontario..... | 1,946 00 | 1,785 00 | 589 10 | 4,320 10 |
| Manitoba..... | 152 25 | 925 00 | 366 00 | 1,443 25 |
| Saskatchewan..... | 39 00 | | | 39 00 |
| Alberta..... | 5 00 | | | 5 00 |
| British Columbia..... | 300 00 | 425 00 | 68 50 | 793 50 |
| Foreign..... | 10 00 | | | 10 00 |
| | 2,670 25 | 6,819 00 | 2,340 70 | 11,829 95 |
| Less refunds..... | | 175 00 | 20 00 | 195 00 |
| Total..... | 2,670 25 | 6,644 00 | 2,320 70 | 11,634 95 |

"B" OPIUM AND NARCOTIC DRUGS REVENUE FOR 1920-21

| | Business Licenses | Import Licenses | Export Licenses | Fines | Total |
|-----------------------|-------------------|-----------------|-----------------|-----------|-----------|
| | \$ c. | \$ c. | \$ c. | \$ c. | \$ c. |
| Nova Scotia..... | 95 00 | | | | 95 00 |
| New Brunswick..... | 215 00 | | | 1,500 00 | 1,715 00 |
| P. E. Island..... | 17 50 | | | | 17 50 |
| Quebec..... | 1,555 00 | 220 00 | 10 00 | 6,390 00 | 8,085 00 |
| Ontario..... | 1,803 50 | 95 00 | 10 00 | 1,819 50 | 3,728 00 |
| Manitoba..... | 287 50 | | | | 287 50 |
| Saskatchewan..... | 155 00 | | | 650 00 | 805 00 |
| Alberta..... | 140 00 | 5 00 | | 1,305 00 | 1,450 00 |
| British Columbia..... | 175 00 | 5 00 | | 875 00 | 1,055 00 |
| | 4,443 50 | 325 00 | 20 00 | 12,449 50 | 17,238 00 |
| Less refunds..... | 18 50 | 5 00 | | 612 50 | 636 00 |
| Total..... | 4,425 00 | 320 00 | 20 00 | 11,837 00 | 16,602 00 |

"C" FEEDING STUFFS REVENUE FOR 1920-21

| | Licenses | Brands | Total |
|-----------------------|----------|--------|--------|
| | \$ c. | \$ c. | \$ c. |
| Quebec..... | 10 00 | 10 00 | 20 00 |
| Ontario..... | 10 00 | 42 00 | 52 00 |
| Alberta..... | 5 00 | 8 00 | 13 00 |
| British Columbia..... | 11 00 | 11 00 | 22 00 |
| Foreign..... | 10 00 | 6 00 | 16 00 |
| Total..... | 46 00 | 77 00 | 123 00 |

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"D" FERTILIZERS REVENUE FOR 1920-21

| | Licenses | Brands | Tota |
|-----------------------|----------|--------|-----------|
| | \$ c. | \$ c. | \$ c. |
| Nova Scotia..... | 1,312 00 | 26 00 | 1,338 00 |
| New Brunswick..... | 200 00 | 2 00 | 202 00 |
| Quebec..... | 1,552 00 | 280 00 | 1,832 00 |
| Ontario..... | 3,120 00 | 118 00 | 3,238 00 |
| Alberta..... | 120 00 | | 120 00 |
| British Columbia..... | 398 00 | 22 00 | 420 00 |
| Foreign..... | 3,080 00 | 72 00 | 3,152 00 |
| Total..... | 9,782 00 | 520 00 | 10,302 00 |

"E" PATENT MEDICINES REVENUE FOR 1920-21

| | Registra- tion Fees | License Fees | Total |
|-----------------------|------------------------|-----------------|-----------|
| | \$ c. | \$ c. | \$ c. |
| Nova Scotia..... | 52 00 | 44 00 | 96 00 |
| New Brunswick..... | 134 00 | 162 00 | 296 00 |
| Quebec..... | 1,580 00 | 1,419 00 | 2,999 00 |
| Ontario..... | 2,194 00 | 2,124 00 | 4,318 00 |
| Manitoba..... | 306 00 | 278 00 | 584 00 |
| Saskatchewan..... | 40 00 | 32 00 | 72 00 |
| Alberta..... | 56 00 | 42 00 | 98 00 |
| British Columbia..... | 178 00 | 149 00 | 327 00 |
| Foreign..... | 736 00 | 877 00 | 1,613 00 |
| | 5,276 00 | 5,127 00 | 10,403 00 |
| Less refunds..... | 94 00 | 51 00 | 145 00 |
| Total..... | 5,182 00 | 5,076 00 | 10,285 00 |

"F" SICK MARINERS' DUES REVENUE FOR 1920-21

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|---------|----------------|
| | \$ c. | \$ c. | \$ c. |
| Nova Scotia..... | 26,572 80 | 220 63 | 26,352 17 |
| New Brunswick..... | 13,929 97 | 26 61 | 13,903 36 |
| Prince Edward Island..... | 126 29 | | 126 29 |
| Quebec..... | 25,367 46 | 188 61 | 25,178 85 |
| British Columbia..... | 22,114 44 | 74 49 | 22,039 95 |
| Total..... | 88,110 96 | 510 34 | 87,600 62 |

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STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at Each Port and Outport

PROVINCE OF NOVA SCOTIA

| Ports and Outports | Net Revenue | Ports and Outports | Net Revenue |
|-------------------------|-------------|-----------------------|-------------|
| | \$ c. | | \$ c. |
| Amherst..... | 0 68 | Lockeport..... | 12 66 |
| River Hebert..... | 19 29 | Lunenburg..... | 284 49 |
| North Port..... | 29 82 | LaHave..... | 159 12 |
| Pugwash..... | 8 94 | Mahone Bay..... | 23 33 |
| Joggins Mines..... | 14 04 | Riverport..... | 18 74 |
| Wallace..... | 3 84 | | 485 68 |
| | 76 61 | | |
| Annapolis Royal..... | 30 50 | North Sydney..... | 697 86 |
| Port Wade..... | 3 93 | | |
| | 34 43 | Parrsboro..... | 167 06 |
| Arichat..... | 1 08 | Apple River..... | 66 71 |
| Petit de Grat..... | 2 55 | Port Greville..... | 82 55 |
| River Bourgeois..... | 1 38 | Spencer's Island..... | 9 92 |
| Descousse..... | 2 28 | Advocate Harbour..... | 5 64 |
| | 7 29 | | 331 88 |
| Baddeck..... | | Pictou..... | 63 20 |
| Munroe's Point..... | 348 10 | Port Hawkesbury..... | 59 48 |
| | 348 10 | Port Hastings..... | 393 79 |
| | | | 453 27 |
| Barrington Passage..... | 0 77 | Port Hood..... | |
| Wood's Harbour..... | 1 67 | Cheticamp..... | 4 09 |
| Clark's Harbour..... | 3 46 | Margaree..... | 0 77 |
| Shag Harbour..... | 0 59 | Grand Etang..... | 0 84 |
| | 6 49 | | 5 70 |
| Bridgewater..... | 73 25 | Shelbourne..... | 27 01 |
| Canso..... | 6 85 | Sandy Point..... | 34 68 |
| Liscomb..... | 2 13 | Port Clyde..... | 0 18 |
| Larry's River..... | 0 60 | | 61 87 |
| Guysborough..... | 1 50 | Sydney..... | 4,057 24 |
| Sherbrooke..... | 13 43 | Louisburg..... | 1,054 96 |
| | 24 51 | | 5,112 20 |
| Digby..... | 85 08 | Weymouth..... | 14 22 |
| Bear River..... | 2 51 | Barton..... | 9 87 |
| Westport..... | 23 98 | Church Point..... | 2 33 |
| Freeport..... | 6 97 | Meteghan..... | 24 21 |
| Tiverton..... | 0 49 | Belliveau's Cove..... | 15 00 |
| | 119 03 | | 65 13 |
| Halifax..... | 16,792 01 | Windsor..... | 532 30 |
| Sheet Harbour..... | 25 71 | Walton..... | 148 63 |
| Spry Bay..... | 0 98 | Hantsport..... | 368 16 |
| Ingramport..... | 43 97 | Cheverie..... | 35 56 |
| | 16,862 67 | | 1,084 65 |
| Kentville..... | 6 53 | Yarmouth..... | 305 23 |
| Kingsport..... | 22 78 | Pubnico..... | 4 12 |
| | 29 31 | Wedgeport..... | 2 71 |
| Liverpool..... | 77 23 | Salmon River..... | 0 17 |
| Port Medway..... | 0 17 | | 312 23 |
| Port Mouton..... | 6 75 | | |
| | 84 15 | | |

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STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at Each Port and Outport—*Continued*

PROVINCE OF NEW BRUNSWICK

| Ports and Outports | Net Revenue | Ports and Outports | Net Revenue |
|--------------------|-------------|---------------------|-------------|
| | \$ c. | | \$ c. |
| Bathurst..... | 168 46 | Newcastle..... | 177 06 |
| Caraquet..... | 13 73 | | |
| Shippegan..... | 1 97 | Sackville..... | |
| | 184 16 | Port Elgin..... | 2 81 |
| | | | 2 81 |
| Campbellton..... | 376 08 | St. Andrews..... | 25 94 |
| Dalhousie..... | 106 17 | Grand Harbour..... | 1 26 |
| | 482 25 | North Head..... | 18 26 |
| | | Lord's Cove..... | 3 01 |
| Chatham..... | 260 01 | | 48 47 |
| Richibucto..... | 2 46 | | |
| Buctouche..... | 7 78 | St. John..... | 12,342 05 |
| | 270 25 | St. George..... | 51 14 |
| | | St. Martins..... | 99 16 |
| Moncton..... | | Beaver Harbour..... | 4 22 |
| Hillsboro..... | 45 43 | Chance Harbour..... | 0 30 |
| Alma..... | 184 50 | | 12,496 87 |
| | 229 93 | St. Stephen..... | 11 56 |

PROVINCE OF PRINCE EDWARD ISLAND

| | | | |
|---------------------|--------|-----------------|------|
| Charlottetown..... | 75 54 | Summerside..... | 5 74 |
| Souris..... | 23 39 | Miminegash..... | 1 82 |
| Cardigan..... | 2 85 | Alberton..... | 0 86 |
| Grand River..... | 2 71 | Tignish..... | 0 18 |
| Murray Harbour..... | 0 15 | | 8 60 |
| Georgetown..... | 9 98 | | |
| Montague..... | 2 89 | | |
| New London..... | 0 18 | | |
| | 117 60 | | |

PROVINCE OF QUEBEC

| | | | |
|-------------------------|-----------|-------------------|--------|
| Gaspé..... | 211 56 | Rimouski..... | 105 06 |
| St. Anne des Monts..... | 122 84 | Matane..... | 113 85 |
| | 334 40 | | 218 91 |
| Montreal..... | 18,119 14 | Sorel..... | 48 78 |
| Paspebiac..... | 62 36 | St. Johns..... | 725 43 |
| Carleton..... | 0 50 | Three Rivers..... | 46 40 |
| Port Daniel..... | 6 37 | | |
| New Richmond..... | 24 32 | | |
| | 93 55 | | |
| Quebec..... | 4,134 67 | | |
| Seven Islands..... | 218 93 | | |
| Magdalene Islands..... | 20 06 | | |
| Levis..... | 52 10 | | |
| Sault au Mouton..... | 53 02 | | |
| Chicoutimi..... | 960 94 | | |
| Escoumains..... | 25 07 | | |
| Bradore Bay..... | 47 45 | | |
| | 5,512 24 | | |

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STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at Each Port and Outport—*Concluded*

PROVINCE OF BRITISH COLUMBIA

| Ports and Outports | Net Revenue | Ports and Ourports | Net Revenue |
|----------------------|-------------|----------------------|-------------|
| | \$ cts. | | \$ cts. |
| Nanaimo..... | 602 28 | Vancouver..... | 10,283 36 |
| Ocean Falls..... | 304 46 | Alert Bay..... | 4 87 |
| Chemanius..... | 104 06 | Powell River..... | 147 20 |
| Union Bay..... | 595 29 | Brittania Beach..... | 9 83 |
| Ladysmith..... | 295 09 | | |
| Port Alberni..... | 0 15 | | 10,445 26 |
| | 1,901 33 | Victoria..... | 8,733 95 |
| New Westminster..... | 280 54 | Sidney..... | 303 00 |
| | | Port Renfrew..... | 0 66 |
| Prince Rupert..... | 372 17 | Tofino..... | 2 00 |
| Anyox..... | 1 04 | | 9,039 61 |
| | 373 21 | | |

Respectfully submitted,

J. A. AMYOT,
Deputy Minister.

REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE
FISCAL YEAR ENDED MARCH 31, 1922

PRINTED BY ORDER OF PARLIAMENT



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1922

*To General His Excellency the Right Honourable Lord Byng of Vimy, G.C.B.,
G.C.M.G., M.V.O., Governor General and Commander in Chief of the Dominion
of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit, herewith, for the information of Your Excellency and the Parliament of Canada the Annual Report of the Department of Health, being for the year ended March 31, 1922. .

I have the honour to be, sir,

Your Excellency's most obedient servant,

H. S. BELAND,
Minister of Health.

OTTAWA, August 28, 1922.

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REPORT OF THE DEPARTMENT OF HEALTH

FOR THE FISCAL YEAR ENDED MARCH 31, 1922

OTTAWA, August 21, 1922.

Honourable H. S. BÉLAND, M.D.,
Minister of Health,
Ottawa.

SIR,—I have the honour to report on the Department of Health for the year ended March 31, 1922, under the following headings:—

1. Quarantine Service.
2. Immigration Medical Service.
3. Marine Hospitals Service.
4. Venereal Disease Control.
5. Housing.
6. Opium and Narcotic Drugs.
7. Proprietary or Patent Medicines.
8. Division of Medical Research.
9. Child Welfare.
10. Food and Drug Laboratories.
11. Financial Statement.

(1) QUARANTINE SERVICE

During the fiscal year 1921-22 Quarantine Stations were kept in operation at Charlottetown, P.E.I.; Chatham, N.B. (Middle Island); Halifax, N.S. (Lawlor's Island); Louisburg, N.S.; North Sydney, N.S.; Quebec, Que. (Grosse Isle); St. John, N.B. (Partridge Island); and Victoria, B.C. (William Head).

The total number of vessels which reported at the various stations was 1,703 and the number of persons examined 322,238, made up as follows:—

| | | | |
|------------------------|----------------|--------|---------|
| Passengers | 1st class..... | 19,090 | |
| | 2nd class..... | 48,459 | |
| | Steerage..... | 97,892 | |
| | | | 165,441 |
| Crews..... | | | 156,371 |
| Cattlemen..... | | | 249 |
| Stowaways..... | | | 165 |
| Distressed seamen..... | | | 12 |
| Total..... | | | 322,238 |

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DISTRIBUTION OF VESSELS AND PERSONS INSPECTED

| Stations | Vessels | Persons (Passengers, Crews, etc.) |
|-------------------------------|---------|---|
| Charlottetown, P.E.I. | Nil | Nil |
| Chatham, N.B. | 9 | 197 |
| Halifax, N.S. | 293 | 66,248 |
| Louisburg, N.S. | 18 | 587 |
| North Sydney, N.S. | 189 | 6,753 |
| Quebec, Que. | 702 | 136,028 |
| St. John, N.B. | 239 | 54,182 |
| Victoria, B.C. | 253 | 58,243 |
| Total. | 1,703 | 322,238 |

| — | Chatham | Halifax | Louisburg | N. Sydney | Quebec | St. John | Victoria | Total |
|-------------------------------|---------|---------|-----------|-----------|---------|----------|----------|---------|
| 1st Class. | | 6,510 | | 44 | 3,911 | 1,331 | 7,294 | 19,090 |
| 2nd Class. | | 10,882 | | | 29,054 | 5,434 | 3,089 | 48,459 |
| Steerage. | | 22,411 | | | 46,894 | 11,216 | 17,371 | 97,892 |
| Crew. | 197 | 26,395 | 577 | 6,697 | 55,815 | 36,201 | 30,489 | 156,371 |
| Cattlemen. | | | | | 249 | | | 249 |
| Stowaways. | | 43 | 5 | 12 | 105 | | | 165 |
| Distressed Seamen. | | 7 | 5 | | | | | 12 |
| Total. | 197 | 66,248 | 537 | 6,753 | 133,028 | 54,182 | 53,243 | 322,238 |

The total number of admissions to the quarantine hospitals during the year was 609, distributed as follows:—

| | |
|-------------------------------|-----|
| Charlottetown, P.E.I. | Nil |
| Chatham, N.B. | Nil |
| Halifax, N.S. | 39 |
| Louisburg, N.S. | Nil |
| North Sydney, N.S. | Nil |
| Quebec, P.Q. | 442 |
| St. John, N.B. | 82 |
| Victoria, B.C. | 47 |
| Total | 610 |

Of these 610 hospital admissions, 247 were patients; the remaining 363 were contacts or persons accompanying the sick. Tables follow showing the distribution by stations of hospital cases, also their classification by disease.

The total number of days in hospital was 7,065, viz., 3,134 for the sick and 3,931 for the contacts, etc.

Of the graver quarantinable diseases, one case of smallpox was landed at the Partridge Island Station, St. John, with four contacts; and at Quebec, three cases of typhus fever among the crew of the ss. *Oristano* were landed at the Grosse Isle Station, together with a number of contacts, none of whom, however, developed the disease. The three positive cases were found to be of a mild character, and were released as cured three weeks after landing. The smallpox case landed at the Partridge Island Station ended fatally; the four contacts, however, did not develop the disease and were discharged from quarantine as soon as the period of incubation had expired.

At the William Head Station, B.C., smallpox occurred in two instances, viz:—

(1) In December, 1921, the ss. *Canadian Highlander* arrived, reporting that a member of the crew had died at sea the day before with malignant smallpox. The body was brought ashore and buried in the quarantine cemetery. The entire crew was bathed and vaccinated and the immediate contacts, and all who could not show

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evidence of recent successful vaccination, were detained. These numbered twenty-one, all of British nationality, seventeen of whom were released as soon as evidence of successful vaccination appeared, the remaining four being kept for the full period of fourteen days.

Following fumigation of infected quarters the ship was allowed to proceed.

(2) On March 14, 1922, the ss. *Empress of Russia* arrived at William Head from Japan and reported that one case of smallpox had been taken ashore at Kobe on March 3, in consequence of which five persons were brought ashore at William Head and detained as contacts, viz., one British and four Chinese. These could not show any satisfactory evidence of vaccination, and were kept in quarantine for twenty-four hours, thus complying with the regulations governing such cases.

No other major quarantinable diseases were met with during the year.

At Grosse Isle Quarantine Station fifteen cases of measles and two cases of chickenpox developed among the contacts. Two cases of cross-infection are reported. These cases were admitted to hospital as scarlet fever contacts, but developed measles twenty-four and twenty-seven days respectively after admission.

No secondary cases developed at Lawlor's Island Station, Halifax.

The quarantine officer at St. John reports that there were no secondary cases among the contacts or of cross-infection developed from exposure after admission to the hospital. One case of measles developed among the contacts five days after admission, and was therefore the result of exposure prior to landing.

At William Head a secondary case of measles occurred among the contacts one day after landing at the station, and was therefore not due to exposure subsequent to leaving the vessel.

Two deaths occurred during the year, namely, one at St. John from smallpox, and one at Halifax from whooping cough.

In the autumn of 1921 the old Rockhead Immigration Detention Hospital at Halifax was equipped as an emergency quarantine detention building, with a hospital unit.

There were two deaths from among the personnel of the Lawlor's Island Station during the fiscal year, namely, Dr. N. E. MacKay, the superintendent, and William D. Logan, station engineer.

During the year, 149 persons were vaccinated in accordance with the quarantine regulations, as follows:—

| | |
|------------------|-----|
| Quebec.. . . . | 10 |
| St. John.. . . . | 113 |
| Victoria.. . . . | 26 |
| Total.. . . . | 149 |

DISTRIBUTION OF HOSPITAL CASES

| Station | Sick | Days in hospital | Contacts and persons accompanying sick | Days in hospital | Total persons in hospital | Total days in hospital |
|---------------|------|------------------|--|------------------|---------------------------|------------------------|
| Halifax..... | 19 | 387 | 20 | 381 | 39 | 768 |
| Quebec..... | 179 | 1,972 | 263 | 2,585 | 442 | 4,557 |
| St. John..... | 41 | 682 | 41 | 640 | 82 | 1,322 |
| Victoria..... | 8 | 93 | 39 | 325 | 47 | 418 |
| Total..... | 247 | 3,134 | 363 | 3,931 | 610 | 7,065 |

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CLASSIFICATION OF HOSPITAL CASES BY DISEASE

| Diseases | Patients | Days in hospital | Contacts and persons accompanying sick | Days in hospital | Total days in hospital |
|---------------------------------|----------|------------------|--|------------------|------------------------|
| Adenitis..... | 1 | 6 | | | 6 |
| Bronchitis..... | 1 | 16 | 1 | 16 | 32 |
| Broncho-pneumonia..... | 3 | 54 | 4 | 40 | 94 |
| Cerebral spinal meningitis..... | 1 | 32 | 1 | 32 | 64 |
| Chickenpox..... | 11 | 164 | 21 | 240 | 404 |
| Dermatitis..... | 3 | 30 | 5 | 50 | 80 |
| Diphtheria..... | 8 | 124 | 8 | 46 | 70 |
| Dysentery..... | 1 | 18 | 2 | 36 | 54 |
| Enteric fever..... | 3 | 133 | | | 133 |
| Erysipelas..... | 6 | 45 | 5 | 34 | 79 |
| German measles..... | 2 | 12 | 5 | 24 | 36 |
| Influenza..... | 7 | 81 | 3 | 27 | 108 |
| Measles..... | 108 | 1,507 | 176 | 2,022 | 3,529 |
| Mumps..... | 13 | 125 | 28 | 270 | 395 |
| Observation..... | 26 | 144 | 37 | 152 | 296 |
| Pediculosis..... | 28 | 95 | 8 | 28 | 123 |
| Psoriasis..... | 1 | 7 | | | 7 |
| Scarlet fever..... | 11 | 405 | 19 | 597 | 1,002 |
| Smallpox..... | 1 | 4 | 30 | 240 | 244 |
| Tonsilitis..... | 3 | 22 | 3 | 23 | 45 |
| Typhus fever..... | 3 | 63 | | | 63 |
| Whooping cough..... | 6 | 47 | 7 | 54 | 101 |
| Totals..... | 247 | 3,134 | 363 | 3,931 | 7,065 |

CLASSIFICATION OF DISEASES BY STATIONS

MEASLES

| Stations | Sick | Hospital Days | Contacts, etc. | Hospital Days | Total days in hospital |
|---------------|------|---------------|----------------|---------------|------------------------|
| Halifax..... | 4 | 80 | 2 | 41 | 121 |
| Quebec..... | 77 | 1,003 | 136 | 1,488 | 2,491 |
| St. John..... | 21 | 356 | 25 | 340 | 696 |
| Victoria..... | 6 | 68 | 13 | 153 | 221 |
| Total..... | 108 | 1,507 | 176 | 2,022 | 3,529 |

MUMPS

| | Sick | Hospital Days | Contacts, etc. | Hospital Days | Total days in hospital |
|---------------|------|---------------|----------------|---------------|------------------------|
| Halifax..... | 1 | 9 | 3 | 27 | 36 |
| Quebec..... | 11 | 112 | 25 | 243 | 355 |
| Victoria..... | 1 | 4 | | | 4 |
| Total..... | 13 | 125 | 28 | 270 | 395 |

OBSERVATION

| | Sick | Hospital Days | Contacts, etc. | Hospital Days | Total days in hospital |
|--------------|------|---------------|----------------|---------------|------------------------|
| Halifax..... | 1 | 2 | | | 2 |
| Quebec..... | 25 | 142 | 37 | 152 | 294 |
| Total..... | 26 | 144 | 37 | 152 | 296 |

DIPHTHERIA

| | Sick | Hospital Days | Contacts, etc. | Hospital Days | Total days in hospital |
|---------------|------|---------------|----------------|---------------|------------------------|
| Quebec..... | 3 | 44 | 7 | 33 | 77 |
| St. John..... | 5 | 80 | 1 | 13 | 93 |
| Total..... | 8 | 124 | 8 | 46 | 170 |

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CLASSIFICATION OF DISEASES BY STATIONS—*Continued*

ERYSIPELAS

| Stations | Sick | Hospital days | Contacts, etc. | Hospital days | Total days in hospital |
|---------------|------|---------------|----------------|---------------|------------------------|
| Quebec..... | 5 | 40 | 5 | 34 | 74 |
| St. John..... | 1 | 5 | | | 5 |
| Total..... | 6 | 45 | 5 | 34 | 79 |

GERMAN MEASLES

| | | | | | |
|-------------|---|----|---|----|----|
| Quebec..... | 2 | 12 | 5 | 24 | 36 |
|-------------|---|----|---|----|----|

ENTERIC FEVER

| | | | | | |
|-------------|---|-----|--|--|-----|
| Quebec..... | 3 | 133 | | | 133 |
|-------------|---|-----|--|--|-----|

SCARLET FEVER

| | | | | | |
|---------------|----|-----|----|-----|-------|
| Halifax..... | 3 | 141 | 6 | 197 | 338 |
| Quebec..... | 4 | 124 | 7 | 237 | 361 |
| St. John..... | 4 | 140 | 6 | 163 | 303 |
| Total..... | 11 | 405 | 19 | 597 | 1,002 |

SMALLPOX

| | | | | | |
|---------------|---|---|----|-----|-----|
| St. John..... | 1 | 4 | 4 | 68 | 72 |
| Victoria..... | | | 26 | 172 | 172 |
| Total..... | 1 | 4 | 30 | 240 | 244 |

TONSILLITIS

| | | | | | |
|---------------|---|----|---|----|----|
| Quebec..... | 2 | 16 | 3 | 23 | 39 |
| St. John..... | 1 | 6 | | | 6 |
| Total..... | 3 | 22 | 3 | 23 | 45 |

TYPHUS FEVER

| | | | | | |
|-------------|---|----|--|--|----|
| Quebec..... | 3 | 63 | | | 63 |
|-------------|---|----|--|--|----|

WHOOPIING COUGH

| | | | | | |
|--------------|---|----|---|----|-----|
| Halifax..... | 6 | 47 | 7 | 54 | 101 |
|--------------|---|----|---|----|-----|

INFLUENZA

| | | | | | |
|---------------|---|----|---|----|-----|
| Halifax..... | 2 | 46 | | | 46 |
| Quebec..... | 3 | 27 | 3 | 27 | 54 |
| St. John..... | 2 | 8 | | | 8 |
| Total..... | 7 | 81 | 3 | 27 | 108 |

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CLASSIFICATION OF DISEASES BY STATIONS—*Concluded*

CHICKENPOX

| Stations | Sick | Hospital Days | Contracts, etc. | Hospital Days | Total days in hospital |
|---------------|------|---------------|-----------------|---------------|------------------------|
| Halifax..... | 1 | 30 | 1 | 30 | 60 |
| Quebec..... | 9 | 113 | 20 | 210 | 323 |
| Victoria..... | 1 | 21 | | | 21 |
| Total..... | 11 | 164 | 21 | 240 | 404 |

CEREBRO SPINAL MENINGITIS

| | | | | | |
|--------------|---|----|---|----|----|
| Halifax..... | 1 | 32 | 1 | 32 | 64 |
|--------------|---|----|---|----|----|

ADENITIS

| | | | | | |
|---------------|---|---|--|--|---|
| St. John..... | 1 | 6 | | | 6 |
|---------------|---|---|--|--|---|

BRONCHITIS

| | | | | | |
|---------------|---|----|---|----|----|
| St. John..... | 1 | 16 | 1 | 16 | 32 |
|---------------|---|----|---|----|----|

TSORIASIS

| | | | | | |
|---------------|---|---|--|--|---|
| St. John..... | 1 | 7 | | | 7 |
|---------------|---|---|--|--|---|

BRONCHO PNEUMONIA

| | | | | | |
|---------------|---|----|---|----|----|
| St. John..... | 3 | 54 | 4 | 40 | 94 |
|---------------|---|----|---|----|----|

DERMATITIS

| | | | | | |
|-------------|---|----|---|----|----|
| Quebec..... | 3 | 30 | 5 | 50 | 80 |
|-------------|---|----|---|----|----|

DYSENTERY

| | | | | | |
|-------------|---|----|---|----|----|
| Quebec..... | 1 | 18 | 2 | 36 | 54 |
|-------------|---|----|---|----|----|

PEDICULOSIS

| | | | | | |
|-------------|----|----|---|----|-----|
| Quebec..... | 28 | 95 | 8 | 28 | 123 |
|-------------|----|----|---|----|-----|

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LEPER STATIONS

Lazaretto, Tracadie, N.B.—At the close of the fiscal year there were ten patients at this Lazaretto, five males and five females; the lowest number since the station was opened. No new cases were admitted during the year. General health conditions are reported by Dr. Langis, the Medical Superintendent, to have been fairly good. Three deaths occurred during the year, namely, a male aged 67 in the last stage of mixed leprosy; a female aged 55, a paralytic for years, from congestion of the lungs; the third a male, aged 64, who in the course of a common cold, developed pneumonia.

Dr. Langis reports that during the year, through the courtesy of the Surgeon Director of the Leprosy Investigation Station at Honolulu, he received a supply of the mixed ethyl esters of the fatty acids of chaulmoogra oil, plus 2 per cent iodine, for intramuscular injection, accompanied by a letter from which the following is an extract:—

“There is no charge for the material, as the United States is not manufacturing it for commercial gain. We are interested in alleviating leprosy in the world at large more particularly in the United States and its possessions. However, I would look upon your institution in the same light as those of the United States, inasmuch as you are only a short distance from our border, and anything which will contribute to health conditions in Canada cannot help but contribute to those in the United States also.”

Dr. Langis states that this preparation is being used with marked success, and is the best medicine so far used at the station in the treatment of leprosy. The generosity and kindness expressed in the above-quoted letter is gratefully acknowledged both by Dr. Langis and by the Department.

Dr. Langis concludes his report by paying a tribute to the Religieuses Hospitalieres de St. Joseph. “Thanks,” he says, “to their energetic, self-denying and tender-hearted co-operation, every member of our small colony of lepers is a contented patient.”

Lazaretto, D'Arcy Island, B.C.—This leper colony is situated on D'Arcy Island, about 30 miles from the William Head Quarantine Station, and is under the superintendency of the medical officer of that station. There are at present five lepers at this Lazaretto, all Chinese. One patient was released during the year as showing no clinical or bacteriological evidences of the disease. The remaining cases show signs of improvement under the chaulmoogra oil treatment. A new case, that of a Chinaman, was admitted on March 31, the last day of the fiscal year, and is included in the number noted above.

In addition to the five Chinese lepers at D'Arcy Island, one other case of leprosy is being treated at the William Head Quarantine Station, namely, a Russian Hebrew. This case was discovered at Winnipeg in the autumn of 1921, and prompt arrangements were made to have him removed to isolated quarters at the quarantine station. The acting medical superintendent reports that this man's condition has already greatly improved under the treatment being administered.

(2) IMMIGRATION MEDICAL SERVICE

During the fiscal year ended March 31, 1922, immigrant passengers, etc., to the number of 63,990 were examined by officers of the Immigration Medical Service at the Atlantic and Pacific ports for the purpose of detecting physical or mental diseases or defects, in accordance with the provisions of the Immigration Act. This number compared with 109,529 for the previous year, shows a decrease of 45,539.

The total number of immigrants "certified" as coming within the "prohibited classes" enumerated in the respective subsections of section 3 of the Immigration Act is as follows:—

| | | |
|------------------------|--|-----|
| Subsection (a) | Persons mentally defective.. . . . | 36 |
| " (b) | Persons having loathsome or contagious disease.. . . | 46 |
| " (c) | Persons physically defective.. . . . | 608 |
| " (f) | Persons who from a medical point of view are likely to become public charges.. . . . | 6 |
| " (k) | Persons of constitutional psychopathic inferiority.. . . | 4 |
| " (m) | Persons mentally or physically defective, not included within any of the foregoing classes.. . . . | 36 |
| Total "Certified"..... | | 736 |

A detailed statement follows showing, by ports, the specific diseases or defects for which "certified."

Immigrant passengers who on arrival required medical or surgical treatment were detained in hospital to the number of 358. A detailed statement follows showing, by ports, the causes for which detained.

Of the immigrant passengers detained on arrival for further medical examination than could be afforded during line inspection, the condition of 170 was found to be negative and they were immediately released. A statement follows showing the number by ports.

In addition to those "certified," immigrants to the number of 722 were found to have minor defects, which while not sufficient to bring them within the "prohibited classes" enumerated in section 3 of the Immigration Act, were noted on individual record cards and filed for future reference. A statement follows showing the number by ports.

NUMBER OF IMMIGRANTS, ETC., MEDICALLY INSPECTED AT OCEAN PORTS

| | |
|---|--------|
| Quebec.. . . . | 41,256 |
| St. John.. . . . | 8,964 |
| Halifax.. . . . | 7,440 |
| Montreal.. . . . | 797 |
| North Sydney.. . . . | 394 |
| Sydney.. . . . | 120 |
| Vancouver.. . . . | 1,628 |
| Victoria.. . . . | 1,538 |
| United States ports (New York, Boston and Portland).. . . . | 1,853 |
| Total.. . . . | 63,990 |

IMMIGRANTS "CERTIFIED" UNDER SECTION 3 OF THE IMMIGRATION ACT

SUBSECTION (A)—MENTALLY DEFECTIVE

| Disability | Quebec | St. John | Halifax | Montreal | North Sydney | Total |
|--------------------|--------|----------|---------|----------|--------------|-------|
| Idiots..... | 1 | | | 1 | | 2 |
| Imbeciles..... | 1 | | | | | 1 |
| Feeble-minded..... | 24 | 1 | | 1 | 1 | 27 |
| Epileptics..... | | 1 | | | | 1 |
| Insane..... | 4 | | 1 | | | 5 |
| Total..... | 30 | 2 | 1 | 2 | 1 | 36 |

SUBSECTION (K)—PERSONS OF CONSTITUTIONAL PSYCHOPATHIC INFERIORITY

| | |
|--------------|---|
| Quebec..... | 3 |
| Halifax..... | 1 |
| Total..... | 4 |

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RACE OF IMMIGRANTS "CERTIFIED" AS MENTALLY DEFECTIVE

| Race | Idiocy | Imbeciles | Feeble Minded | Epilepsy | Insane | Constitutional Psychopathic Inferiority | Total |
|----------------|--------|-----------|------------------|----------|--------|---|-------|
| British..... | 2 | | 26 | | 3 | 4 | 35 |
| French..... | | | | | 1 | | 1 |
| Hebrew..... | | | 1 | | 1 | | 2 |
| Italian..... | | | | 1 | | | 1 |
| Roumanian..... | | 1 | | | | | 1 |
| Total..... | 2 | 1 | 27 | 1 | 5 | 4 | 40 |

SUBSECTION (B)—PERSONS SUFFERING FROM LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | St. John | Halifax | Montreal | Victoria | Vancouver | Total |
|--------------------------------|--------|----------|---------|----------|----------|-----------|-------|
| Favus of scalp..... | 1 | | | | | | 1 |
| Gonorrhoea..... | 4 | | | 1 | 3 | | 8 |
| Ringworm of nails..... | 2 | 1 | | | | | 3 |
| Ringworm of scalp..... | 4 | 6 | | | 1 | | 11 |
| Syphilis..... | 2 | | | | 1 | 1 | 4 |
| Trachoma..... | 4 | 5 | 2 | 1 | | | 12 |
| Tubercular Adenitis..... | | | | | | 1 | 1 |
| Tubercular glands of neck..... | | 1 | | | | | 1 |
| Tuberculosis (pulmonary)..... | 3 | | | 2 | | | 5 |
| Total..... | 20 | 13 | 2 | 4 | 5 | 2 | 46 |

RACE OF IMMIGRANTS "CERTIFIED" AS HAVING LOATHSOME OR CONTAGIOUS DISEASE

| Race | Favus | Gonorrhoea | Ringworm | Syphilis | Trachoma | Tuber- culosis | Total |
|---------------|-------|------------|----------|----------|----------|-------------------|-------|
| Armenian..... | | | | | 1 | | 1 |
| Belgian..... | | | | | 1 | | 1 |
| British..... | 1 | 3 | 6 | 1 | | 2 | 13 |
| Chinese..... | | 2 | 1 | 2 | 1 | 1 | 7 |
| Hebrew..... | | 1 | 7 | 1 | 6 | 3 | 18 |
| Japanese..... | | 1 | | | | | 1 |
| Polish..... | | | | | 3 | 1 | 4 |
| Syrian..... | | 1 | | | | | 1 |
| Total..... | 1 | 8 | 14 | 4 | 12 | 7 | 46 |

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SUBSECTION (C)—PERSONS PHYSICALLY DEFECTIVE—"LIABLE TO BECOME A PUBLIC CHARGE"

| Defects | Quebec | St. John | Halifax | Victoria | total |
|--|--------|----------|---------|----------|-------|
| Ankylosis..... | | 1 | 4 | | 5 |
| Asthma..... | 1 | | | | 1 |
| Acromegaly..... | | | 1 | | 1 |
| Amputated members..... | 24 | 4 | 2 | | 30 |
| Anaemia..... | 1 | | 1 | | 2 |
| Blindness, partial..... | 2 | 7 | | | 9 |
| Blindness, total..... | 1 | | 2 | | 3 |
| Bright's disease..... | | | | 1 | 1 |
| Bronchitis, chronic..... | 2 | 1 | 2 | | 5 |
| Cardiac hypertrophy..... | | | 3 | | 3 |
| Chorea..... | 1 | | | | 1 |
| Cleft palate..... | 4 | | | | 4 |
| Curvature of spine..... | 24 | 1 | 3 | | 28 |
| Club foot..... | 2 | 1 | | | 3 |
| Deafness and dumbness..... | 4 | 2 | 3 | | 9 |
| Deafness (total)..... | 18 | 7 | | | 25 |
| Deafness (partial)..... | 54 | | | | 54 |
| Disordered action of heart..... | 5 | | | | 5 |
| Dislocated hip..... | 7 | 1 | | | 8 |
| Dwarfed and deformed..... | 3 | | | | 3 |
| Emphysema..... | | | 1 | | 1 |
| Emphysema of lungs (chronic)..... | 1 | | | | 1 |
| Flat foot..... | 1 | | 1 | | 2 |
| General debility..... | 2 | | | | 2 |
| General debility and anaemia..... | 2 | | | | 2 |
| Genu valgum..... | 1 | | | | 1 |
| Goitre (simple)..... | 2 | | | | 2 |
| Goitre (Exophthalmic)..... | 1 | | | | 1 |
| Hernia..... | 53 | 3 | 10 | | 66 |
| Hysteria..... | 1 | | | | 1 |
| Hydrocele..... | 3 | | | | 3 |
| Impaired members..... | | 17 | 13 | | 30 |
| Impediment of speech..... | 10 | 1 | | | 11 |
| Incontinence of urine (chronic)..... | 1 | | | | 1 |
| Infantile paralysis..... | | | 1 | | 1 |
| Lack of physical development..... | 2 | | 2 | | 4 |
| Lameness..... | | 12 | | | 12 |
| Locomotor ataxia..... | | | | 1 | 1 |
| Loss of power of member (partial)..... | 113 | | | | 113 |
| Nervous debility..... | | | 1 | | 1 |
| Paralysis (partial)..... | 11 | 3 | | | 14 |
| Paralysis (agitans)..... | 1 | | | | 1 |
| Paraplegia..... | 1 | | 1 | | 2 |
| Phlyctenular conjunctivitis..... | | | 1 | | 1 |
| Premature senility..... | 13 | 4 | 2 | | 19 |
| Poor physique..... | 1 | | | | 1 |
| Psoriasis..... | 1 | | | | 1 |
| Rickets..... | 5 | | 2 | | 7 |
| Rheumatism (chronic)..... | 11 | | | | 11 |
| Sciatica..... | 1 | | | | 1 |
| Shell shock..... | | | 2 | | 2 |
| Senility..... | | 2 | | | 2 |
| Synovitis (chronic)..... | 2 | | | | 2 |
| Torticollis (spasmodic)..... | 1 | | | | 1 |
| Valvular disease of heart..... | 11 | 5 | 3 | 1 | 20 |
| Varicose and Varicose Veins..... | 1 | | | | 1 |
| Varicose ulcer..... | 1 | | | | 1 |
| Varicose veins..... | 5 | | 1 | | 6 |
| Vision defective..... | 56 | | 3 | | 59 |
| Total..... | 468 | 72 | 65 | 3 | 608 |

SUBSECTION (J)—PERSONS WHO FROM A MEDICAL POINT OF VIEW ARE LIKELY TO BECOME PUBLIC CHARGES

| Cause | Quebec | St. John | Halifax | Total |
|-----------------------------|--------|----------|---------|-------|
| Illegitimate pregnancy..... | 3 | 1 | 2 | 6 |

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SUBSECTION (M)—MENTALLY AND PHYSICALLY DEFECTIVE—AFFECTING ABILITY TO EARN A LIVING

| Defects | Quebec | St. John | Halifax | Total |
|--|--------|----------|---------|-------|
| Mentally defective..... | 5 | | | 5 |
| Mentally and physically defective..... | 5 | | | 5 |
| Physically defective..... | 2 | 8 | 16 | 26 |
| Total..... | 12 | 8 | 16 | 36 |

IMMIGRANTS DETAINED FOR MEDICAL OR SURGICAL TREATMENT AND SUBSEQUENTLY RELEASED AS CURED OR FIT TO TRAVEL

| Cause | Quebec | St. John | Halifax | Montreal | Vancouver | Victoria | Total |
|--------------------------------|--------|----------|---------|----------|-----------|----------|-------|
| Abcess..... | 4 | | 8 | | | | 12 |
| Acute indigestion..... | | | 1 | | | | 1 |
| Anaemia..... | | | | | 1 | | 1 |
| Appendicitis..... | 2 | | | 1 | | | 3 |
| Articular rheumatism..... | | | | | 1 | | 1 |
| Broncho-pneumonia..... | 1 | | | | | | 1 |
| Bronchitis..... | 1 | | | | | | 1 |
| Burns..... | 1 | | 1 | | | | 2 |
| Cardiac failure..... | X-1 | | | | | | 1 |
| Cellulitis..... | 1 | | 1 | | 1 | | 3 |
| Conjunctivitis..... | 12 | 1 | 3 | 1 | 16 | 19 | 52 |
| Childbirth..... | 15 | | 2 | | | | 17 |
| Convulsions..... | 1 | | | | | | 1 |
| Cerebral meningitis..... | | | | | | X-1 | 1 |
| Corneal ulcer..... | 1 | | | | | | 1 |
| Cyst (Meibomian)..... | | | | | 2 | | 2 |
| Debility..... | | | | | 1 | | 1 |
| Dermatitis..... | 6 | 1 | | | | | 7 |
| Diphtheria..... | 2 | | | | | | 2 |
| Dislocated elbow..... | 1 | | | | | | 1 |
| Eczema..... | 4 | | 2 | | 1 | | 7 |
| Endometritis..... | | | | | 1 | | 1 |
| Enteritis..... | 1 | | 1 | | | | 2 |
| Fractured elbow joint..... | | | 1 | | | | 1 |
| Fractured patella..... | 1 | | | | | | 1 |
| Gonorrhoea..... | | | | | | 1 | 1 |
| Impetigo..... | 19 | 3 | 4 | | 2 | | 28 |
| Influenza..... | | | 5 | | | | 5 |
| Ingrown toe nail..... | 1 | | | | | | 1 |
| Insomnia..... | | | | 1 | | | 1 |
| Intestinal perforation..... | X-1 | | | | | | 1 |
| Infected arm..... | 1 | | | | | | 1 |
| Infected lip..... | 1 | | | | | | 1 |
| Lacerated breast..... | | | 1 | | | | 1 |
| Mumps..... | 1 | | | | | | 1 |
| Myalgia..... | | | 1 | | | | 1 |
| Periosteitis..... | 2 | | | | | | 2 |
| Peritonitis..... | | | X-1 | | | | 1 |
| Pharyngitis..... | 1 | | | | | | 1 |
| Pleurisy..... | 1 | | | | | | 1 |
| Phlegmon..... | 2 | | | | | | 2 |
| Pneumonia..... | 3 | | | 1 | | | 4 |
| Purpura haemorrhagica..... | | | | | | X-1 | 1 |
| Pyorrhoea..... | | | | | 1 | | 1 |
| Otitis Media..... | 3 | | 2 | | | | 5 |
| Ringworm..... | 1 | 6 | 1 | 1 | | 1 | 10 |
| Scabies..... | 9 | | | | | 114 | 123 |
| Sprained ankle..... | 1 | | | | | | 1 |
| Stomatitis..... | | | | | 1 | | 1 |
| Sycoosis barbae..... | 1 | | | | | | 1 |
| Tonsillitis..... | 6 | | 2 | | | | 8 |
| Trachoma..... | | 3 | | 5 | 1 | | 9 |
| Traumatic arthritis..... | 1 | | | | | | 1 |
| Varicose ulcers..... | | | | 1 | | | 1 |
| Whooping cough..... | | | 2 | | | | 2 |
| Wounds (various)..... | 2 | | | | | | 2 |
| Valvular disease of heart..... | X-1 | | | | | 1 | 2 |
| Total..... | 113 | 14 | 38 | 11 | 29 | 138 | 343 |

X—Died.

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IMMIGRANTS DETAINED FOR FURTHER MEDICAL EXAMINATION AND
SUBSEQUENTLY RELEASED AS NEGATIVE

| | |
|-------------------|-----|
| Quebec.. . . . | 100 |
| St. John.. . . . | 26 |
| Halifax.. . . . | 26 |
| Montreal.. . . . | 16 |
| Vancouver.. . . . | 2 |
| Total.. . . . | 170 |

IMMIGRANTS "RECORDED" FOR MINOR MENTAL OR PHYSICAL DEFECTS

| | |
|------------------|-----|
| Quebec.. . . . | 485 |
| St. John.. . . . | 96 |
| Halifax.. . . . | 141 |
| Total.. . . . | 722 |

(3) MARINE HOSPITALS SERVICE

The administration of this branch of the public service was transferred from the Department of Marine to the Department of Health on November 1, 1919.

Under the provisions of Part V of the Canada Shipping Act (Sick and Distressed Mariners' Act), sick mariners' dues of 2 cents per ton, net or registered tonnage, are levied on every vessel entering any port in the provinces of Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and British Columbia, from a foreign port or a port not within the same province. The officers and seamen of fishing vessels not registered in Canada do not pay dues, nor participate in the benefits accruing therefrom, but fishing vessels registered in Canada may pay these dues and participate in the benefits.

The Act does not apply to the province of Ontario; therefore, no sick mariners' dues are collected from that province.

In consideration of the payment of these sick mariners' dues, sick, injured or distressed mariners employed on vessels on which said duty has been paid, are entitled to free and gratuitous treatment. The expenditure for such treatment is defrayed out of the appropriation voted by Parliament for that purpose.

During the fiscal year 1921-22, the Department of Health operated two marine hospitals, one at Sydney and the other at Lunenburg, in the province of Nova Scotia. The marine hospital at Douglastown, N.B., was closed during the year and arrangements made with the Hotel-Dieu, Chatham, for the treatment of all sick mariners arriving at that port and vicinity.

During the year 1921-22, the following hospitals have looked after the treatment of sick and distressed mariners at contract rates with the department:—

Nova Scotia—

Halifax—

Victoria General Hospital.

City Health Board Hospital (Contagious diseases).

Pictou—Pictou Cottage Hospital.

North Sydney—Hamilton Memorial Hospital.

New Glasgow—Aberdeen Hospital.

Antigonish—St. Martha's Hospital.

Windsor—Payzant Memorial Hospital.

Amherst—Highland View Hospital.

Springhill—Springhill Cottage Hospital.

Yarmouth—Yarmouth Hospital.

Kentville—Nova Scotia Sanatorium (Tubercular patients).

Glace Bay—St. Joseph's Hospital.

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New Brunswick—

Bathurst—James Dunn Hospital.
 Campbellton—Hotel-Dieu Hospital.
 Chatham—Hotel-Dieu.
 Moncton—Moncton Hospital.
 St. Stephens—Chipman Memorial.
 St. John—
 General Public Hospital.
 City Health Board Hospital (Contagious diseases).
 River Glade—Jordan Memorial Sanatorium (Tubercular patients).

Prince Edward Island—

Charlottetown—
 Charlottetown Hospital.
 Prince Edward Island Hospital.
 Summerside—Prince County Hospital.

Quebec—

Chicoutimi—Hotel-Dieu St. Valier.
 Levis—Hotel-Dieu.
 Montreal—
 Montreal General Hospital.
 Notre Dame Hospital.
 Hotel-Dieu.
 Royal Victoria Hospital.
 St. Paul's (Contagious diseases).
 Alexandra Hospital (Contagious diseases).

Quebec—

Jeffery Hale's Hospital.
 Hotel-Dieu.
 Sorel—Hôpital Général.
 Three Rivers—St. Joseph's Hospital.
 St. Jean—Hôpital St. Jean.

British Columbia—

Anyox—General Hospital.
 Chemainus—General Hospital.
 Ladysmith—General Hospital.
 Nanaimo—Nanaimo Hospital.
 New Westminster—
 Royal Columbian Hospital.
 St. Mary's Hospital.
 Ocean Falls—Ocean Falls Hospital.
 Prince Rupert—General Hospital.
 Ocean Falls—Ocean Falls Hospital.
 Prince Rupert—General Hospital.
 Union Bay—Cumberland Hospital.
 Vancouver—

Vancouver General Hospital.
 St. Paul's Hospital.

Victoria—

St. Joseph's Hospital.
 City Isolation Hospital (Contagious diseases).

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Where there is no marine or designated hospital, the collector of customs makes best provision for the treatment of sick mariners at private residences or public boarding houses.

During the year 1921-22, the number of sick and injured mariners treated in the service was 2,035, with the following distribution:—

TABLE SHOWING NUMBER OF SEAMEN TREATED AT EACH PORT, AND NUMBER OF DAYS HOSPITAL OR PRIVATE RESIDENCE TREATMENT

| Port | Number of Seamen | Days' Treatment |
|--|------------------|-----------------|
| <i>Nova Scotia—</i> | | |
| Abbotts Harbour.. . . . | 1 | 14 |
| Advocate Harbour.. . . . | Nil | |
| Annapolis Royal.. . . . | Nil | |
| Apple River.. . . . | 2 | |
| Arichat.. . . . | 6 | 35 |
| Barrington.. . . . | 2 | |
| Barton.. . . . | Nil | |
| Bear River.. . . . | 3 | |
| Bridgetown.. . . . | 3 | |
| Bridgewater.. . . . | 1 | 18 |
| Canning.. . . . | 1 | |
| Canso.. . . . | 14 | 127 |
| Cheticamp.. . . . | 27 | |
| Clark's Harbour.. . . . | 4 | 21 |
| Digby.. . . . | 42 | 7 |
| Freeport.. . . . | 5 | |
| Gabarus.. . . . | 1 | |
| Glace Bay.. . . . | Nil | |
| <i>Halifax—</i> | | |
| Victoria General.. . . . | 151 | 3,343 |
| Infirmary.. . . . | 1 | 32 |
| Mader Hospital.. . . . | 1 | 21 |
| City Hospital.. . . . | 5 | |
| Hantsport.. . . . | 8 | |
| Ingramport.. . . . | 1 | |
| Kentville.. . . . | 1 | 271 |
| Kingsport.. . . . | 5 | |
| La Have.. . . . | 11 | |
| Little Bass River.. . . . | 1 | |
| Liverpool.. . . . | 39 | 361 |
| Lockeport.. . . . | 24 | 159 |
| Louisburg.. . . . | 3 | 4 |
| Lunenburg.. . . . | 6 | 135 |
| Mahone Bay.. . . . | 4 | |
| Margaree.. . . . | 5 | |
| Margaretsville.. . . . | 2 | 14 |
| Meteghan.. . . . | 5 | 137 |
| North Sydney.. . . . | 80 | 208 |
| Parrsboro.. . . . | 7 | |
| Pictou.. . . . | 31 | 424 |
| Point Tupper, Port Mulgrave, Hawkesbury and Hastings.. . . . | 14 | 2 |
| Port Greville.. . . . | 3 | |
| Port Hood.. . . . | 3 | |
| Port Latour.. . . . | Nil | |
| Port Morien.. . . . | 3 | |
| Port Mouton.. . . . | 1 | 8 |
| Port Wade.. . . . | 1 | 58 |
| Pubnico.. . . . | 11 | |
| Pugwash.. . . . | 1 | |
| Sandy Cove.. . . . | 3 | 14 |
| Shelburne.. . . . | 13 | 4 |
| Sherbrooke.. . . . | 1 | |
| Springhill.. . . . | 2 | 56 |
| St. Peters.. . . . | 4 | |
| Sydney.. . . . | 54 | 2,619 |
| Sydney Mines.. . . . | 1 | |
| Weymouth.. . . . | 5 | |
| Windsor.. . . . | 11 | 133 |
| Yarmouth.. . . . | 98 | 902 |
| Total.. . . . | 232 | 9,127 |

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TABLE SHOWING NUMBER OF SEAMEN TREATED AT EACH PORT, ETC.—*Continued*

| Port | Number of Seamen | Days' Treatment |
|------------------------------------|---------------------|--------------------|
| <i>New Brunswick—</i> | | |
| Alma and Albert.. . . . | 2 | |
| Bathurst.. . . . | 12 | 67 |
| Beaver Harbour.. . . . | 2 | 48 |
| Campbellton.. . . . | 14 | 63 |
| Caraquet.. . . . | 2 | |
| Chatham.. . . . | 8 | 218 |
| Dalhousie.. . . . | Nil | |
| Grand Harbour.. . . . | 2 | |
| Hillsboro.. . . . | 1 | |
| Moncton.. . . . | 1 | |
| North Head.. . . . | 3 | |
| Port Elgin.. . . . | 1 | 54 |
| River Glade.. . . . | 1 | 332 |
| Richibucto.. . . . | Nil | |
| St. Andrews.. . . . | 1 | |
| St. Georges.. . . . | 1 | |
| Shediac.. . . . | Nil | |
| Shippegan.. . . . | 3 | |
| St. John— | | |
| General Public Hospital.. . . . | 147 | 2,008 |
| Infirmary, Mission Society.. . . . | 1 | 32 |
| County Hospital.. . . . | 3 | 209 |
| City.. . . . | 3 | |
| St. Stephens.. . . . | 2 | |
| Total.. . . . | 210 | 3,031 |
| <i>Prince Edward Island—</i> | | |
| Alberton.. . . . | 2 | |
| Charlottetown— | | |
| P.E.I. Hospital.. . . . | 8 | 459 |
| Charlottetown Hospital.. . . . | 6 | 243 |
| Crapaud.. . . . | 1 | |
| Georgetown.. . . . | 2 | |
| Montague.. . . . | 3 | 24 |
| Murray Harbour.. . . . | 5 | |
| Summerside.. . . . | 6 | 53 |
| Souris.. . . . | 13 | 6 |
| Tignish.. . . . | 2 | |
| Total.. . . . | 48 | 785 |
| <i>Quebec—</i> | | |
| Batiscan.. . . . | 1 | |
| Chicoutimi.. . . . | 4 | 340 |
| Gaspé.. . . . | 3 | |
| Harrington.. . . . | 1 | 28 |
| Lachine.. . . . | 1 | 32 |
| Lévis.. . . . | 12 | 135 |
| Magdalen Islands.. . . . | 1 | |
| Matane.. . . . | 1 | |
| Montreal— | | |
| Notre Dame.. . . . | 130 | 1,674 |
| General Hospital.. . . . | 431 | 3,555 |
| Royal Victoria.. . . . | 16 | 427 |
| St. Paul's.. . . . | 1 | 11 |
| Alexandra.. . . . | 1 | 4 |
| Paspebiac.. . . . | 1 | |
| Port Alfred.. . . . | 6 | |
| Quebec— | | |
| Hotel Dieu.. . . . | 16 | 229 |
| Jeffery Hale's.. . . . | 24 | 442 |
| Civic Hospital.. . . . | 1 | 5 |
| Seven Islands.. . . . | 2 | 10 |
| Sorel.. . . . | 3 | 14 |
| St. Johns.. . . . | 9 | |
| Tadoussac.. . . . | 11 | 202 |
| Three Rivers.. . . . | 8 | 5 |
| Total.. . . . | 689 | 7,213 |

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TABLE SHOWING NUMBER OF SEAMEN TREATED AT EACH PORT, ETC.—*Concluded*

| Port | Number of Seamen | Days' Treatment |
|---|---------------------|--------------------|
| <i>British Columbia—</i> | | |
| Bella Bella.. | 1 | |
| Chemainus.. | 7 | 17 |
| Ladysmith.. | 2 | 17 |
| Nanaimo.. | 7 | 171 |
| New Westminster.. | 2 | 26 |
| Ocean Falls.. | 47 | 2 |
| Port Alice and Quatsino.. | 3 | 45 |
| Port Alberni.. | 10 | 20 |
| Prince Rupert.. | 19 | 184 |
| Tofino.. | 1 | |
| Union Bay.. | 2 | |
| <i>Vancouver—</i> | | |
| St. Paul's Hospital.. | 174 | 3,017 |
| General Hospital.. | 19 | 480 |
| <i>Victoria—</i> | | |
| St. Joseph's Hospital.. | 58 | 1,165 |
| Isolation.. | 4 | 41 |
| Total.. | 356 | 6,185 |
| Grand total: Number of seamen.. | 2,035 | |
| Days' treatment.. | | 26,341 |

The following is a tabular statement showing diseases and injuries for which sick mariners received treatment during the year:—

| Disease | No. of Seamen treated |
|---|--------------------------|
| General Diseases.. | 413 |
| Measles.. | 5 |
| Diphtheria.. | 2 |
| Scarletina.. | 1 |
| Mumps.. | 6 |
| Typhoid fever.. | 32 |
| Para-typhoid.. | 1 |
| Erysipelas.. | 3 |
| Cholera morbus.. | 1 |
| Tuberculosis.. | 17 |
| Malaria.. | 3 |
| Syphilis.. | 83 |
| Gonorrhœa.. | 52 |
| Scabies.. | 9 |
| Toemia.. | 2 |
| Alcoholism.. | 2 |
| Morphinism.. | 1 |
| Diabetes.. | 1 |
| Rheumatism.. | 63 |
| Beri beri.. | 1 |
| Anaemia.. | 3 |
| New growths—non-malignant.. | 4 |
| General debility.. | 6 |
| Cyst.. | 4 |
| Neurasthenia.. | 11 |
| Influenza.. | 98 |
| Ptomaine.. | 2 |
| Local Diseases.. | 1,080 |
| Diseases of the Nervous System.. | 40 |
| 1. Of the nerves.. | 8 |
| Neuritis.. | 8 |
| 2. Of the Spinal Cord and Membranes.. | 1 |
| Degeneration of lateral column.. | 1 |
| 3. Of Brain and Membranes.. | 1 |
| Inflammation.. | 1 |

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The following is a tabular statement showing diseases and injuries for which sick mariners received treatment during the year—*Continued*

| Disease | No. of Seamen treated | |
|--|-----------------------|-----|
| 4. Functional and other nervous diseases.. . . . | | 30 |
| Paralysis.. . . . | 2 | |
| Hemiplegia.. . . . | 2 | |
| Epilepsy.. . . . | 1 | |
| Congestion of brain.. . . . | 2 | |
| Vertigo.. . . . | 1 | |
| Neuralgia.. . . . | 14 | |
| Hiccoughs.. . . . | 1 | |
| Insomnia.. . . . | 2 | |
| Hysteria.. . . . | 1 | |
| Headaches.. . . . | 2 | |
| Psychosis.. . . . | 1 | |
| Mania.. . . . | 1 | |
| Diseases of the Eye.. . . . | | 35 |
| Conjunctivitis.. . . . | 24 | |
| Chalazion.. . . . | 2 | |
| Choroiditis.. . . . | 2 | |
| Dacryocystitis.. . . . | 1 | |
| Ulcer cornea.. . . . | 3 | |
| Iritis.. . . . | 2 | |
| Trachoma.. . . . | 1 | |
| Diseases of the Ear.. . . . | | 23 |
| Cerumen.. . . . | 6 | |
| Otitis Media.. . . . | 9 | |
| Deafness.. . . . | 5 | |
| Mastoiditis.. . . . | 3 | |
| Diseases of the Nose.. . . . | | 9 |
| Rhinitis.. . . . | 7 | |
| Abscess.. . . . | 1 | |
| Epistaxis.. . . . | 1 | |
| Diseases of the Circulatory System.. . . . | | 17 |
| Valvular diseases.. . . . | 11 | |
| Tachycardia.. . . . | 1 | |
| Athroma.. . . . | 1 | |
| Arterio-sclerosis.. . . . | 1 | |
| Thrombosis.. . . . | 1 | |
| Haematoma.. . . . | 1 | |
| Oedema.. . . . | 1 | |
| Diseases of the Respiratory System.. . . . | | 226 |
| Bronchitis.. . . . | 119 | |
| Tonsillitis.. . . . | 39 | |
| Pneumonia.. . . . | 25 | |
| Broncho-pneumonia.. . . . | 1 | |
| Laryngitis.. . . . | 5 | |
| Congestion of lung.. . . . | 1 | |
| Haemorrhage of lung.. . . . | 5 | |
| Pleurisy.. . . . | 20 | |
| Asthma.. . . . | 10 | |
| Abscess of lung.. . . . | 1 | |
| Diseases of the Digestive System.. . . . | | 293 |
| Dental caries.. . . . | 58 | |
| Toothache.. . . . | 14 | |
| Alveolar abscess.. . . . | 4 | |
| Quinsy.. . . . | 1 | |
| Pharyngitis.. . . . | 3 | |
| Ulcer of stomach.. . . . | 3 | |
| Gastritis.. . . . | 34 | |
| Indigestion.. . . . | 27 | |
| Pyorrhoea.. . . . | 6 | |
| Cancer of stomach.. . . . | 1 | |
| Haemorrhoids.. . . . | 8 | |
| Fistula.. . . . | 2 | |
| Appendicitis.. . . . | 42 | |
| Colitis.. . . . | 11 | |
| Jaundice.. . . . | 7 | |
| Diarrhoea.. . . . | 12 | |

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The following is a tabular statement showing diseases and injuries for which sick mariners received treatment during the year—*Continued*

| Disease | No. of Seamen treated | |
|--|-----------------------|-----|
| Hepatitis.. . . . | 4 | |
| Hernia.. . . . | 31 | |
| Constipation.. . . . | 4 | |
| Dysentery.. . . . | 7 | |
| Enteritis.. . . . | 4 | |
| Dyspepsia.. . . . | 9 | |
| Intestinal obstruction.. . . . | 1 | |
| Gall-stones.. . . . | 4 | |
| Ulcer of duodenum.. . . . | 1 | |
| Diseases of the Lymphatic System.. . . . | | 23 |
| Adenitis.. . . . | 23 | |
| Diseases of the Urinary System.. . . . | | 39 |
| Nephritis.. . . . | 10 | |
| Bright's.. . . . | 3 | |
| Renal colic.. . . . | 3 | |
| Peri-nephritis abscess.. . . . | 1 | |
| Cystitis.. . . . | 13 | |
| Prostatitis.. . . . | 8 | |
| Retention.. . . . | 1 | |
| Diseases of the Generative System.. . . . | | 41 |
| Urethritis.. . . . | 2 | |
| Balanitis.. . . . | 1 | |
| Stricture.. . . . | 6 | |
| Phimosis.. . . . | 2 | |
| Chancroids.. . . . | 4 | |
| Varicocele.. . . . | 7 | |
| Hydrocele.. . . . | 1 | |
| Orchitis.. . . . | 15 | |
| Epididymitis.. . . . | 3 | |
| Diseases of the Organs of Locomotion.. . . . | | 76 |
| Osteitis.. . . . | 6 | |
| Sciatica.. . . . | 6 | |
| Myalgia.. . . . | 13 | |
| Lumbago.. . . . | 36 | |
| Bursitis.. . . . | 4 | |
| Sinusitis.. . . . | 1 | |
| Periosteitis.. . . . | 1 | |
| Caries.. . . . | 2 | |
| Synovitis.. . . . | 7 | |
| Diseases of the Connective Tissues.. . . . | | 177 |
| Cellulitis.. . . . | 121 | |
| Abscess.. . . . | 56 | |
| Diseases of the Skin.. . . . | | 74 |
| Boils.. . . . | 24 | |
| Carbuncles.. . . . | 5 | |
| Erythema.. . . . | 3 | |
| Eczema.. . . . | 21 | |
| Acne.. . . . | 1 | |
| Herpes.. . . . | 4 | |
| Urticaria.. . . . | 3 | |
| Dermatitis.. . . . | 1 | |
| Ulcers.. . . . | 11 | |
| Whitlow.. . . . | 1 | |
| Injuries— | | |
| General injuries.. . . . | | 54 |
| Burns.. . . . | 28 | |
| Multiple injuries.. . . . | 26 | |
| Local injuries.. . . . | | 488 |
| Contusion of muscles.. . . . | 9 | |
| Wounds of muscles.. . . . | 7 | |
| Injuries face.. . . . | 7 | |
| Injuries eyes.. . . . | 11 | |
| Injuries head.. . . . | 20 | |
| Injuries upper extremities.. . . . | 133 | |
| Fracture bones of nose.. . . . | 1 | |

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The following is a tabular statement showing diseases and injuries for which sick mariners received treatment during the year—*Concluded*

| Disease | No. of Seamen treated |
|--|-----------------------|
| Fracture skull.. . . . | 2 |
| Fracture ribs.. . . . | 13 |
| Injuries chest.. . . . | 3 |
| Foreign body in eyes.. . . . | 8 |
| Fracture jaw.. . . . | 6 |
| Fracture arm.. . . . | 14 |
| Dislocated hand.. . . . | 1 |
| Sprained wrist.. . . . | 4 |
| Fracture shoulder.. . . . | 2 |
| Fracture forearm.. . . . | 12 |
| Dislocated elbow.. . . . | 3 |
| Fractured fingers.. . . . | 4 |
| Fractured clavicle.. . . . | 2 |
| Injuries side.. . . . | 15 |
| Injuries back.. . . . | 25 |
| Injuries abdomen.. . . . | 3 |
| Injuries lower extremities.. . . . | 56 |
| Fractured femur.. . . . | 13 |
| Fractured tibia.. . . . | 5 |
| Fractured fibula.. . . . | 3 |
| Fracture tibia and fibula.. . . . | 2 |
| Fractured patella.. . . . | 1 |
| Fractured bones of foot.. . . . | 11 |
| Sprained ankle.. . . . | 13 |
| Flat feet.. . . . | 3 |
| Gun-shot wound.. . . . | 2 |
| Fatigue.. . . . | 10 |
| Frostbite.. . . . | 2 |
| Malingering.. . . . | 4 |
| Physical examinations.. . . . | 12 |
| X-ray examinations.. . . . | 11 |
| Observation.. . . . | 4 |
| No diagnosis.. . . . | 31 |
| Total number of seamen treated.. . . . | 2,035 |

During the course of the year, the Service lost three of its efficient members, who were removed by death, namely, Dr. R. L. Botsford, Port Physician at Moncton; Dr. M. Gervais, at Three Rivers; and Dr. R. Withers, Annapolis Royal.

The information regarding expenditure in connection with this branch of the public service will be found in the financial statement.

(4) VENEREAL DISEASE CONTROL

The sum of \$200,000 was granted by the Dominion Government for the work of venereal disease control for the fiscal year ended March 31, 1922. Of this sum, \$10,000 was granted to the Canadian National Council for Combating Venereal Disease; \$10,000 was retained for current expenses and the balance divided among the provinces as follows:—

| | |
|--------------------------|-------------|
| New Brunswick.. . . . | \$ 7,517 83 |
| Nova Scotia.. . . . | 10,573 86 |
| Alberta.. . . . | 11,979 62 |
| Manitoba.. . . . | 12,611 20 |
| British Columbia.. . . . | 14,628 19 |
| Saskatchewan.. . . . | 15,361 63 |
| Quebec.. . . . | 47,388 80 |
| Ontario.. . . . | 57,473 68 |

This money was given to the provinces in accordance with the agreement which was entered into between the Dominion Government and the provinces in the year 1919, for the control of venereal diseases.

TEXT OF AGREEMENT

That each of the provinces would expend an amount at least equal to that received and provide:

- (a) Clinics for the free treatment of venereal disease.
- (b) Hospital beds for patients requiring indoor treatment.

(c) Free treatment in institutions, such as reformatories, jails, etc.

(d) Laboratories for all necessary examinations.

(e) Work of propaganda.

The whole of the work in each province to be in the hands of an expert in the work.

There are, at present, in operation in the Dominion fifty-two clinics, situated as follows:—

| | |
|--------------------------|-----------|
| Nova Scotia.. . . . | 5 clinics |
| New Brunswick.. . . . | 8 " |
| Quebec.. . . . | 8 " |
| Ontario.. . . . | 13 " |
| Manitoba.. . . . | 4 " |
| Saskatchewan.. . . . | 8 " |
| Alberta.. . . . | 4 " |
| British Columbia.. . . . | 2 " |

Free hospital accommodation and free treatment in institutions have been provided. Laboratories working in conjunction with these clinics are in operation in all of the provinces. The campaign of education, which is so necessary a part of the work, is being carried on energetically. Each of the provinces, in conjunction with the Dominion Department of Health, is issuing literature destined for the education of the public. This department has distributed the following educational literature throughout the Dominion:—

PUBLISHED IN ENGLISH

| | |
|---|--------|
| Publication No. 1, "General Circular of Information concerning Venereal Diseases" | 11,325 |
| " No. 2, "Venereal Diseases, Wassermann Test". | 12,000 |
| " No. 3, "Venereal Diseases, Microscopic Examination" | 11,675 |
| " No. 4, "Venereal Diseases, Diagnosis and Treatment". | 12,550 |
| Pamphlet No. 1, "Information for Men, Syphilis and Gonorrhoea" | 53,340 |
| " No. 2, "Information for Young Women About Sex Hygiene" | 39,090 |
| " No. 3, "Information for Parents, Teaching of Sexual Hygiene to Children" | 48,190 |
| " No. 4, "Instructions for Preventing the Transmission of Gonorrhoea" | 16,100 |
| " No. 5, "Instructions for Preventing the Transmission of Syphilis" | 15,100 |
| Stokes', "To-day's World Problem in Disease Prevention" | 8,695 |
| "Prevention of Blindness in Babies" | 41,890 |
| "Abstracts of Current Venereal Disease Literature" | 4,500 |
| Posters | 24,641 |
| Pamphlet, "To the Sailor" | 45,150 |
| " "To the Captain and Ship's Surgeon" | 5,650 |

PUBLISHED IN FRENCH

| | |
|---|--------|
| Publication No. 1, "Maladies Vénériennes, Circulaire Générale de Renseignements sur ces Maladies" | 6,300 |
| " No. 2, "Maladies Vénériennes, Réaction de Wassermann" | 6,400 |
| " No. 3, "Maladies Vénériennes, Examen Microscopique" | 6,300 |
| " No. 4, "Maladies Vénériennes, Diagnostic et Traitement" | 6,300 |
| Pamphlet No. 1, "Renseignements pour les Hommes, Syphilis et Blennorrhagie" | 63,600 |
| " No. 2, "Renseignements pour les Jeunes Filles sur l'Hygiène Sexuelle" | 29,300 |
| " No. 3, "Renseignements pour les Parents l'Enseignement de l'Hygiène Sexuelle aux Enfants". | 42,700 |
| " No. 4, "Instructions pour Prévenir la Transmission de la Gonorrhée ou Chaudépiasse" | 8,250 |
| " No. 5, "Instructions pour Prévenir la Transmission de la Syphilis" | 8,250 |
| Stokes', "Le Problème Universel du Jour" | 2,640 |
| "Prévention de la Cécité chez les Nouveau-nés" | 11,800 |
| Pamphlet, "Au Matelot" | 1,800 |
| " "Au Capitaine et au Médecin du Vaisseau" | 1,625 |

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Reports are being received monthly from each of the provinces, giving the number of cases treated in clinics and institutions, as well as the number of laboratory examinations. These reports show a constant increase in the number of admissions to clinics, which evidences the usefulness and necessity of the work.

The Chief of the Division of Venereal Disease Control visited the clinics and found them modern, fully equipped and properly conducted.

The provinces have complied essentially with the text of the agreement.

(5) HOUSING

Provided by Order in Council, P.C. 2997, dated December 3, 1918, the sum of \$25,000,000 was allotted for housing loans to the provinces.

The total amount expended during fiscal year 1920-21 was \$14,658,200.

A revote of \$12,000,000 was approved by Parliament for fiscal year 1921-22 and arranged that when the total amount expended exceeded \$26,658,200, namely \$14,658,200 amount spent to 1920-21 and \$12,000,000 voted in 1921-22, the advances should cease.

The amounts loaned to the provinces as of date March 31, 1922, were:—

| | |
|--------------------------|--------------|
| Manitoba.. . . . | \$ 1,975,000 |
| New Brunswick.. . . . | 1,525,000 |
| Ontario.. . . . | 8,750,000 |
| British Columbia.. . . . | 1,701,500 |
| Quebec.. . . . | 2,056,620 |
| Nova Scotia.. . . . | 1,100,000 |
| | <hr/> |
| | \$17,108,120 |

The total number of houses erected, 3,874.

(Exclusive of activities of New Brunswick for year 1921-22.)

Number of houses under construction and planned to be built, 179.

Number of municipalities operating, 175.

The unexpended amount available as of date March 31, 1922, was \$9,550,080.

A revote of \$9,550,080 was approved by Parliament for fiscal year 1922-1923.

Housing Acts have been enacted by all of the Provincial Governments with the exception of Alberta.

Provincial Housing Schemes have been prepared by the Provincial Governments, and approved by the Federal Government, with the exception of Prince Edward Island and Alberta.

Numerous inquiries have been received from time to time from industrial organizations, prominent merchants, civic officials, soldier organizations, and other individuals, of the provinces of Prince Edward Island and Alberta, asking information as to the procedure for participating under the provisions of the Federal Loan.

Three years have passed since the Federal Loan was granted and the provinces of Manitoba, New Brunswick and British Columbia, have taken their full quota, which is an index of operations by the provinces generally, although some criticism was offered that the granting of the loan interfered with ordinary process of building houses by private enterprise, but not by builders themselves.

The Provincial Government of Quebec requested that the Quebec Housing Scheme (Act of the province of Quebec to provide for the construction of workingmen's dwellings, 9 George V, Chapter 10) be amended, as the Minister of Municipal Affairs of the province of Quebec reported that certain requirements in the General Housing Scheme of the province were preventing municipalities from taking advan-

tage of the Federal Loan for Housing and, therefore, desired that certain modifications be made to the following sections in the Provincial Housing Scheme, i.e.:—

1. The prescribed area of lots.
2. Proportion of cost of land to dwelling.
3. Restriction as to fences.
4. Construction.
5. Size of rooms.
6. Height and type of buildings.
7. Conversion of dwellings into stores, etc.

Inasmuch as the proposed changes related to matters which came within the direct discretion of the Provincial Government and, further, that the four conditions under which loans have been granted to the Quebec Government had been complied with, the amendment was passed by Order in Council, P.C. 2670, under date August 1, 1921.

Questions were raised by this province concerning the admissability of building duplex houses occupied in part by the building owner, and the other part rented. One of the four conditions imposed by the Federal Government in the housing project is that loans may be granted only for building houses, and purchasing land, to Provincial Governments, municipalities, housing societies with limited dividends, and owners of lots, *for the purpose of erecting homes for their own occupancy.*

The reason this condition is imposed is that there is no practical way by which the Government could restrict the rent which the builders of such a structure, containing more than one dwelling, could obtain from the other dwelling which he did not occupy and, of course, it would be quite improper for the Government to lend money to one person to build two houses and rent one at a speculative profit. However, it is provided in the Provincial Housing Scheme that duplex houses could be built, but under such conditions that each and every tenement would be a separate dwelling within the meaning of the Act and, therefore, loans made to each owner of each tenement or separate dwelling. If a municipality, or housing company, as provided for in the Act, chose to build such duplex houses, the foregoing condition would not obtain.

In the province of British Columbia the applications from municipalities were greatly in excess of funds available, proving that the Better Housing Scheme in this province has been signally successful. But, unfortunately the housing situation in several municipalities still remains acute.

In the province of Manitoba, under the provisions of the Provincial Housing Scheme, owners of houses were assisted in their sanitary installations to houses already erected, thereby creating valuable assets both from a monetary and health point of view.

In the province of Ontario, there are now ninety-nine municipalities which have passed by-laws under the provisions of the Ontario Housing Act, 1919, and appointed Housing Commissions. Of these nineteen are cities, fifty are towns, seventeen are villages, and thirteen are townships. Seventy-two municipalities have constructed houses.

During 1921 the cost of constructing houses decreased probably twenty per cent below the cost of construction in 1920. While there was a considerable shortage of houses, the demand was nothing like the same for new houses in 1921 as that which had been in the two previous years, owing no doubt to the fact that industries were not as active in 1921 as they had been in the two previous years.

The amount secured by the province of Ontario from the Dominion Government for housing purposes was \$8,750,000, and was to be loaned under the provisions of the Ontario Housing Act, 1919, at five per cent.

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The total loans approved for houses erected in 1919, 1920, 1921, under the Ontario Housing Act, 1919, was \$7,768,018.40, and for land purchased by Housing Commissions, \$256,343.27. Of this \$4,195,721.95 was loaned to seventeen cities; \$2,583,343.27 was loaned to thirty-four towns; \$364,579 was loaned to thirteen villages; and \$880,748.26 was loaned to eight townships.

It has been the experience of the Provincial Government to have the monthly repayments, as a rule, remitted promptly on the 1st of each month.

It is interesting to note that 69 per cent of all the houses erected in 1919, 1920 and 1921, are either of brick veneer or of solid construction.

The total of houses erected during the period 1919 to 1922 was 2,771, and the loans made on same amount to \$9,867,336.06, out of which 557 were erected under the Municipal Housing Act, 1920. Thus the average cost per house was \$3,560.93.

Operations under the Ontario Housing Act, 1919, have now almost ceased, although a number of loans were approved before December 31, 1920, for houses which have not yet been erected. But it is expected that these houses will be erected this year. This would account for the difference in the amount actually borrowed from the Federal Government to that which has been advanced by the province to the various municipal authorities.

Seventy per cent of the houses erected under the Ontario Housing Act have been erected by persons owning lots, which lots were conveyed to the Housing Commission and a loan secured on same for the erection of a house for the full cost thereof. The plans for the houses being approved by the Housing Commission, and the borrower making his own contract for the erection of the house.

Another method adopted was that of a Housing Commission purchasing land and erecting houses thereon, the layout of the land being approved by the said Commission. But this method has not been so successful, inasmuch as some of the Housing Commissions have erected houses without having purchasers for them, with the result that in a small number of cases some houses are still undisposed of. In other cases Housing Commissions have allowed persons to take the houses without any cash payment, but with merely some security for the first three years' payments. In a number of these cases the Housing Commissions have found it somewhat difficult to satisfy the persons who have taken the houses, and the Commissions have been put to some expense in altering houses.

Whilst from a theoretical point of view the development plan is the ideal one in connection with housing, from a practical point of view the other method has obtained much better results.

The Housing Director of Nova Scotia in his annual report for the year 1921 states that in comparing conditions as they are to-day with those which existed some years ago, it can safely be said that the Housing Act has been a success. It has been a boon not only to the homeseeker, but to those communities where it has been brought into operation and fulfilled in a large measure the purposes for which it was intended.

The general principles and standards recommended by the Federal Government were adopted by the province after careful consideration, not as ideals difficult to attain, but as the minimum standards ensuring health and comfort.

In the opinion of the Housing Director of this province, the tendency of the public is to invest their savings in bonds and Government securities, and it is probable that no adequate solution of housing problems will be arrived at until a larger proportion of the liquid funds of the country become available for mortgage loans.

The procedure adopted in dealing with applicants for the loan in this province was as follows:—

1. Application passed upon by Housing Commission and forwarded by Secretary of commission for approval of director.

2. Application for loan accompanied by plans and specifications inspected by Government architect before receiving approval of director.

3. Building lot is deeded by applicant for loan to Housing Commission and applicant may then proceed with the erection of house.

4. Estimates for progress payments to Contractor are made in accordance with following routine:—

First payment.—When foundations and piers are in and sewer and water connections made.

Second payment.—When building is framed, boarded and shingled, and exterior door and window frames placed in position.

Third payment.—When building has been plastered (two coats), chimneys and brick work completed and rough plumbing and wiring in.

Fourth payment.—When building has been completed according to plans and specifications and passed by Commission.

Fifth payment.—Thirty days after completion.

Recommendation for payment of progress estimates is made by the town or city building Inspector, and work is inspected by Government architect before the certificate of director is issued to the provincial auditor.

In dealing with the economic benefits of the Housing Scheme, it is stated in the report that by leaving aside for the moment the benefits which have been derived by the individuals who have secured homes on reasonable terms, what has been the material advantages to the communities which have adopted the Act? The city of Halifax may be taken as a fair example.

During the calendar year 1921 over 70 per cent of the building operations in the city were undertakings of the Housing Commission. Forty-nine contractors have participated in a fair share of profits. Employment has been furnished to approximately 300 carpenters, 440 sundry occupations including plumbers, lathers, plasterers, floor-layers, teamsters, etc. One hundred and twenty thousand six hundred dollars has been paid in wages by contractors, and over \$443,490 has been distributed among contractors and firms supplying building materials, plumbing and electrical fixtures.

The Housing Act has been a great offensive against all sordid ugliness, and in addition to all its other benefits has added to the beauty of Halifax and the province.

It is further stated that all of the houses are of frame construction, the external walls being shingled, with the exception of two houses in Halifax, one of which is brick veneered and the other covered with stucco; many of the roofs having fire-resisting shingles, while others have the ordinary wood shingles.

A large percentage of the houses have hardwood floors and brick or hardwood mantelpieces.

All houses have bathrooms fitted with enamelled bath, basin and w.c., the kitchens having the usual sink, and in many cases laundry tubs as well. Where sewage system was not available, the houses have been provided with cesspools.

Where the houses have not been heated by hot air or hot water systems, base burners have been used and practically all the houses are lighted by electricity.

The Federal Department by co-operation in exchange of plans and current action with the Ministries of Health of Great Britain, Australia, New Zealand, South Africa, and Norway, mutual advantage has accrued to all concerned.

By request of the Canadian Red Cross Society various provinces have had housing lectures prepared by the Branch, as also manufacturing corporations have been advised from time to time on questions of community development for their personnel.

There are signs in Canada that the acuteness of the housing situation is passing, but the causes of this are mixed in their social significance inasmuch as office buildings and hotels, that were closed with the abolition of the bar, have been

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converted into apartment houses and in many cases sanitary accommodation, lighting and ventilation are deficient; further there is an indication of overcrowding that must be considered very bad for health and morals.

As expressed by the leading public health authorities of the North American Continent, in the last analysis healthful homes are dependent upon the interaction of biologic, economic, social, educational and political forces, many of which are beyond the control of individuals. In a broad consideration of the problem, therefore, more attention must be given in the future to the numerous phases of heredity and eugenics, industrial organization and economic returns, sociological elements, educational opportunities, public health education, and political ideas as transmuted into legislative enactment and civic interest. It is insufficient to point out the existence of poor plumbing, leaking roofs, and unlighted rooms, the inroads of insects, the existence of alcoholism or drug addiction, the ignorance of individuals and their poverty, and the presence of the diseased and the defectives.

Vision must be directed to the deeper-lying causes responsible for these shortcomings. Much of the responsibility for low standards of homes must be transferred from the individual to the community which countenances, tolerates or condones them. The interdependence of human life and welfare demands the protection of the weak in the interest of the strong. The healthful home may be an expression of personality and individual resourcefulness, but its nature and limitations, its advantages and disadvantages, its harmony or maladjustment, its unhealthfulness or its healthfulness are indices of the public interest in the welfare of all manner of citizens, regardless of race, social or economic status.

STATEMENT SHOWING USE OF FEDERAL HOUSING LOAN IN THE PROVINCES
(Compiled from official reports) as of date March 31, 1922.

Dr. JOHN A. AMYOT, C.M.G., Deputy Minister.

B. EVAN PARRY, M.R.A.I.C., Supervising Architect.

| Province | Amount payable on basis of 1911 census on \$25,000,000 basis | Additional amount payable on basis of \$31,250,000 | Amount actually borrowed from Federal Government | Amount requested by municipalities | Amount allotted by Province | Amount advanced by Province | No of houses built | No. of municipalities | No. of houses under construction | No. of houses to be built |
|----------------------------|--|--|---|--|-----------------------------|-----------------------------|--------------------|-----------------------|----------------------------------|---------------------------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. | | | | |
| Manitoba..... | 1,580,524 79 | 395,133 69 | 1,975,000 00 | 1,175,634 00 | ..... | 1,097,841 09 | 314 | 17 | ..... | 33 |
| New Brunswick..... | 1,220,710 53 | 305,177 63 | 1,525,000 00 | 200,000 00 | ..... | 693,700 00 | 107 | 14 | ..... | ..... |
| Ontario..... | 8,753,291 93 | 2,188,322 98 | 8,750,000 00 | 10,694,000 00 | 8,727,492 48 | 7,924,442 48 | 2,214 | 72 | 20 | ..... |
| British Columbia..... | 1,361,521 59 | 340,380 40 | 1,701,500 00 | ..... | 1,758,050 00 | 1,697,300 00 | 475 | 32 | 89 | ..... |
| Quebec..... | 6,949,255 01 | 1,737,313 75 | 2,056,620 00 | 23,675,000 00 | 7,398,000 00 | 2,316,585 00 | 511 | 33 | ..... | ..... |
| Nova Scotia..... | 1,707,931 14 | 426,982 79 | 1,100,000 00 | 1,118,460 00 | 981,720 00 | 864,142 00 | 253 | 7 | ..... | 37 |
| Saskatchewan..... | 1,708,257 23 | 427,064 31 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Prince Edward Island..... | 325,144 45 | 81,286 11 | No Housing Scheme submitted, therefore Act not operative. | Municipal Affairs Report, 15 Dec., 1921. | ..... | ..... | ..... | ..... | ..... | ..... |
| Alberta..... | 1,299,714 03 | 324,928 51 | No legislation enacted. | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Northwest Territories..... | 64,110 99 | 16,027 75 | " | " | ..... | ..... | ..... | ..... | ..... | ..... |
| Yukon..... | 29,528 31 | 7,382 08 | " | " | ..... | ..... | ..... | ..... | ..... | ..... |
| Total..... | 25,000,00000 | 6,250,000 00 | 17,108,120 00 | 36,863,094 00 | 20,030,262 48 | 14,594,010 57 | 3,874 | 175 | 109 | 70 |

Notes :

A revote of \$9,550,080.00 was approved by Parliament for fiscal year 1922-23.

New Brunswick has not reported activities of fiscal year 1921-22, so figures given are those for year 1920-21.

Ontario has built 557 houses under the provisions of the Municipal Housing Act in addition to those herein given under the Ontario Housing Act.

THE ECONOMY OF HOUSING

An intermediate issue of the fortnightly record of the British National Housing and Town Planning Council, dated February 4, is devoted to correspondence which has passed between the secretary of the council and Sir Charles Ruthen, Director-General of the Housing Department of the Ministry of Health. The following points are stated as embodying the considered judgment of the leading members of the council:

1. The first 100,000 houses completed by the close of 1921 are infinitely better houses than those built for the working classes before the war. Instead of the pre-war urban houses, built twenty, thirty and forty per acre, during the past three years a limit of twelve to the acre has been set; each house is thus provided with a valuable garden at a minimum of expense. More economical methods of developing sites has enabled the cost of roadmaking to be reduced by grading them as arterial, secondary, and residential roads. On the whole, the new houses are extremely plain and simple in form; architects have shown wisdom in planning rooms broad and not deep to avoid dark corners. The sizes and heights of rooms have been a fruitful source of difference between the housing committees of local authorities and the Ministry of Health; the view generally held by local authorities is that economy in this respect has been carried too far. Without the approval of the Ministry local authorities have not been able to make a single contract; those concerned can testify to the meticulous care with which items amounting to a few shillings have been rigorously excluded.

2. The cost of the first 100,000 houses has been too great. Concerning this high cost the charge of profiteering in the general sense most certainly cannot stand as against the architect; and even in the other great sections of the building industry—both operative and employing—it is difficult to establish the charge of profiteering. In 1919 and 1920, and early in 1921, the costs of production were extremely high in all industries. Throughout the whole country there was a kind of vicious circle of determination to demand high prices, and if the charge of profiteering is to be regarded as valid, then it must be brought against all those engaged in every industry. It becomes so general a charge that it loses all definite point and critical value. The real doubt arises concerning the wisdom of the Government and local authorities in pressing forward with their housing schemes in a period of high building costs. On this point only one conclusion is possible, relating to the carrying into effect of certain promises concerning social betterment, given to those members of the community who poured out from poor homes to serve their fellow men, and who on returning from the war found themselves and their families faced with a deplorable famine in housing accommodation. The Government, therefore, rightly proceeded to redeem their pledges. Each week now witnesses the falling of prices towards a post-war normal level. It is already possible to secure tenders for parlour cottages at £500. Assuming that £1 to-day buys the same commodities as 10s. did before the war, the £500 cottage may be regarded as the equivalent of the £250 pre-war cottage. The period of high building cost has clearly come to an end. In the opinion of the Council the verdict of history will be that whilst it has been a costly business to build the first 100,000 houses it would have cost infinitely more in social discontent and national humiliation if housing pledges had been broken or evaded. The council also feel that when the public are fully cognizant of the real merits of the houses built, and to be built, by 1,200 local authorities under the Housing Act of 1919, we shall as a people begin to be justly proud of the honourable fulfilment of pledges redeemed throughout a period of unprecedented economic difficulty.

(6) OPIUM AND NARCOTIC DRUGS

In connection with the administration of the Opium and Narcotic Drug Act, during the year, the following number of the various licenses were issued:

| | |
|---|-----|
| Import licenses..... | 186 |
| Export licenses..... | 34 |
| Wholesale druggists' licenses..... | 112 |
| Retail druggists' license to manufacture..... | 57 |

The total amount of fees collected from all licenses issued during the year amounted to \$3,850.

Through the close supervision of the licensing system and the following up of all sales of narcotics, from wholesale druggist to the retailer, physician, dentist and veterinary surgeon, the department has been able to reduce by a very substantial amount, the quantity of narcotics imported through the regular channels during the year, in comparison with the quantity imported from year to year since the licensing system was inaugurated in the year 1919, as will be noted from the following table:—

| | 1919 | 1920 | 1921 | 1922 |
|------------------|-------------|-------------|------------|------------|
| Cocaine..... | 12,333 ozs. | 6,968 ozs. | 3,310 ozs. | 2,952 ozs. |
| Morphine..... | 30,087 " | 28,198 " | 12,124 " | 8,774 " |
| Crude opium..... | 34,263 lbs. | 13,626 lbs. | 2,953 lbs. | 1,700 lbs. |

In the ordinary course of business, a number of Canadian manufacturers of pharmaceuticals export to their customers in other countries small quantities of narcotics from time to time. Most of these drugs exported are in manufactured form and are contained in a mixture with other ingredients, or in tablet or pill form. As a general rule, orders for narcotics are received with a general order for drugs of various descriptions. Before, however, a license can be granted to a Canadian manufacturer to export narcotics, he must furnish the department with a written permit from his customer, issued by the authorities of the Government of the importing country, permitting the importation of the drugs in question, and all such permits must state definitely that the drugs intended for import are required for medicinal or scientific purposes. The above arrangement, with regard to the export of narcotics, has been brought about through the Council of the League of Nations, which body is charged with dealing with the opium question.

The following table shows the amount of narcotics exported from Canada during the twelve months ended March 31, 1922:—

| Drug | Destination | Quantity |
|---------------------------------|-------------------|------------------------------------|
| Tincture of opium..... | Lima, Peru..... | 5 lbs., 3,840 grains. |
| | Newfoundland..... | 6,469 grains. |
| Cocaine..... | Newfoundland..... | 92 grains. |
| | England..... | 3,359 grains. |
| | Lima, Peru..... | 96 grains. |
| | New Zealand..... | 1,500 tubes anocaine with cocaine. |
| Morphine..... | Newfoundland..... | 8,870 grains. |
| | South Africa..... | 375 " |
| | England..... | 151 " |
| | Lima, Peru..... | 821 " |
| Diacetyl morphine (heroin)..... | Newfoundland..... | 66½ " |
| | England..... | 815 " |
| Codeine..... | Newfoundland..... | 5,125 " |
| | England..... | 1,458 " |
| | Lima, Peru..... | 500 " |

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In so far as the trade in narcotics is concerned through the legitimate channels, the Department has absolute control through the system now in force whereby all sales of narcotics are reported to the Department and carefully tabulated, so that an accurate record is available at all times of the amount of these drugs received by every druggist, dentist, veterinary surgeon or physician in Canada. It is, therefore, a comparatively easy matter to follow up the disposition of these drugs with a view to confining the use of the same to legitimate medicinal or scientific purposes.

The problem, however, of dealing with the illicit traffic, is a much more difficult matter, as the latter supply is, of course, smuggled into the country by every conceivable means and device. Most of these illicit shipments are smuggled in by the crews on the incoming steamships, the drugs being carefully concealed below decks, either among the cargo or in the coal bunkers, etc. Quite a large proportion of such shipments are brought into the country by freight or cargo vessels, and particularly tramp steamers calling at Canadian ports for wheat cargoes, etc.

Most of the cocaine, morphine and heroin being smuggled into the country, comes from Europe and particularly Germany, and the bulk of the opium reaching Canada through illicit channels originates in China or Japan, and reaches this country through the ports of Vancouver and Victoria, B.C.

Considerable quantities of these drugs are also smuggled into the country by being concealed in such articles as electrical fixtures, statuettes, piping, etc. In other instances, drugs are concealed in bales of goods, or sometimes in barrels of olives or similar containers.

Contrary to general opinion, this drug traffic is not confined to the larger cities and towns, but is fairly general throughout the whole Dominion, extending from the Atlantic to the Pacific. There is not a Province or District in Canada that can be said to be free from this drug evil at the present time. Even in a settlement as far north as The Pas, Man., and in a large number of the small towns and villages along the National Transcontinental Line between Quebec and Cochrane.

This traffic is controlled almost altogether by large drug rings, who employ numerous agents to distribute the drug. Some of these agents simply act as a medium of distribution, between a dealer with a large stock and the small pedler, and work on a commission basis. The smaller pedler in turn does the drugs up in small powders or "decks", as they are generally known to the underworld, consisting of from one to three or four grains. These "decks" are sold anywhere from 50 cents to \$3.00 a piece, depending altogether on the scarcity of the article in the district concerned.

When it is realized that the legitimate value of these drugs in quantities, at the present time, is between \$4 and \$5 an ounce for morphine and cocaine, and about \$3 per pound for opium (which retails in the underworld at from \$50 to \$150 per pound) it will be seen that the profits of these illicit pedlars or traffickers, is enormous.

Some of these drug rings are international in character, having connections both in Europe and in America. Many of these smaller drug rings have extensive connections between such cities as Montreal, Toronto and the Pacific Coast or vice versa, also between large Canadian Cities and American centres such as New York, Chicago, Boston, Seattle, etc. These rings also have a secret code known only to the members of the underworld. They are thereby able to communicate with one another in the various parts of the country without the slightest possibility of any letters or telegrams, exchanged between them, being deciphered by the authorities.

Hundreds of young men and women, addicted to the use of these drugs, become slaves, so to speak, for these large traffickers, who engage them to carry these drugs between the different towns and cities, as these poor unfortunates, who act as the distributors, live more in fear of being shut off from their customary supply for personal use, than anything else, on account of the misery and suffering they would have to endure by the drug being cut off abruptly. This has been proven in many instances where persons of this character have been arrested and sent to jail, and eventually cured of the habit as they have expressed their joy on being free from the

craving for these drugs and more especially on being freed from the clutches of these unscrupulous individuals, who prey on the vices of humanity solely for the enormous profits derived from the illicit sale of these drugs.

Under the present law, the police are very much handicapped in so far as being able to take prompt and efficient action is concerned. In connection with this work, time is a most important factor.

Under the law, as at present in force, before a police officer can arrest an individual or search him, or search an automobile or other conveyance, or a building, warehouse or other premises, he must first go before a magistrate, or justice of the peace, and obtain a search warrant. It so happens, in many instances, that the police receive information that there are drugs being transported by cab or automobile, and if they are in a position to take immediate action, in many instances they would be successful in recovering large quantities of these drugs, which are being transported solely for illicit purposes, but in cases of this nature the police are powerless to act.

In many other cases where prompt action is necessary for the police to intercept or seize illicit stocks of these drugs, it so happens that it might be a Saturday afternoon or a Sunday, or a legal holiday when it is a very difficult matter to locate a magistrate or justice of the peace, the same thing would apply at night.

These drug traffickers know that the police are powerless to act without a warrant and that they are, therefore, fairly safe for a reasonable time, and it is one of their customs to keep changing the hiding place of these drugs from building to building or room to room, as the case may be, knowing that if the police obtain a warrant to search a certain building at a certain address, that such a warrant would not be valid to search another building at a different address.

Representations have been made to the department from time to time by the Commissioner of the Royal Canadian Mounted Police, and also by most of the chiefs of police of the large cities throughout the Dominion, that the Act should be amended in order to empower the police to search for these drugs without the necessity of having to first secure a search warrant so that they might be in a position to take prompt and efficient action in all cases where they have reason to believe that stocks of these drugs are being concealed or transported for illicit purposes.

The following table shows the number of prosecutions handled by the Royal Canadian Mounted Police on behalf of the Department of Health during the fiscal year ended March 31, 1922:—

| Province | Doctors | Druggists | Veterinary Surgeons | Illicit Dealers (Other than Chinamen) | Chinamen |
|--------------------------------------|---------|-----------|---------------------|---------------------------------------|----------|
| British Columbia..... | 4 | ..... | ..... | 11 | 300 |
| Alberta..... | 3 | ..... | 1 | 28 | 59 |
| Saskatchewan..... | ..... | ..... | ..... | 15 | 73 |
| Manitoba..... | ..... | 6 | ..... | 9 | ..... |
| Ontario..... | 2 | ..... | ..... | 12 | 52 |
| Quebec (not including Montreal)..... | 7 | ..... | ..... | 4 | 10 |
| Montreal..... | 3 | 5 | 3 | 82 | 123 |
| New Brunswick..... | 4 | ..... | ..... | 1 | 9 |
| Nova Scotia..... | ..... | ..... | ..... | 1 | 8 |
| Prince Edward Island..... | ..... | ..... | ..... | ..... | ..... |
| Total..... | 23 | 11 | 4 | 163 | 634 |

or a total of 835 convictions.

In connection with the number of prosecutions handled by the federal police, it is of interest to note that of the 835 convictions secured, 634 were Chinamen, and of the 163 illicit dealers, other than Chinamen, approximately 50 per cent were foreign born.

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Statistics covering the number of convictions for infractions of the Opium and Narcotic Drug Act, other than by the federal police, are not available for the fiscal year. The following table, however, shows the number of convictions for infractions against the Act for the judicial year ended September 30, 1921, including federal, provincial and municipal prosecutions. Of this number 660 were federal cases.

| | |
|--------------------------------------|-------|
| Breach of Opium and Drug Act.. . . . | 1,006 |
| Keeping opium den.. . . . | 69 |
| Frequenting opium den.. . . . | 260 |
| Smoking opium.. . . . | 104 |
| Illegal possession of.. . . . | 350 |
| Giving and dispensing drugs.. . . . | 3 |
| Selling opium.. . . . | 72 |
| Total.. . . . | 1,864 |

It is the intention of the department to endeavour to arrange for closer co-operation between the provincial, municipal and federal authorities during the coming year with a view to dealing more effectively with this illicit drug traffic.

(7) PROPRIETARY OR PATENT MEDICINES

During the fiscal year ended March 31, 1922, licenses were issued authorizing the sale throughout Canada of approximately 4,100 preparations to which registration numbers were assigned under The Proprietary or Patent Medicine Act.

Periodically samples of these medicines were procured on the open market and analyzed at the departmental laboratory, for the purpose of ascertaining whether they were being manufactured in accordance with the terms of registration, and as a consequence a number of manufacturers were successfully prosecuted, the offences being chiefly for lack of medication in alcoholic preparations and for employing scheduled drugs in excess of the proportions permitted.

In addition, a large quantity of goods was seized and confiscated, over eight thousand cases of a certain alcoholic tonic valued approximately at \$40,000 being taken from one manufacturer. Another who procured registration for a headache powder as containing 2 grains of acetanilide per maximum dose, and raised the quantity of this drug to $7\frac{1}{2}$ grains per maximum dose in the article as actually delivered to the consumer, was prosecuted and lost all of this extensively advertised preparation on sale in Canada.

Many shipments of medicines not in conformity with this law were intercepted by our inspectors and returned to the manufacturers, who were obliged to conform to requirements or withdraw their goods from sale.

The newspapers were perused for illicit advertising and advertisers made to revise advertisements which were held to contravene sections 7 (e) and (f), which sections provide in effect that no preparation subject to the provisions of this law may be represented as a cure and that no false or extravagant claims may be made for the article.

The fundamental principle of the Act in question is to require the manufacturer of proprietary medicines to place his preparation on the market so that the ordinary layman may understand what he is consuming. Therefore, section 2 (d), requires that the formula be printed on the labels and wrappers, or the article manufactured in accordance with a formula given in certain recognized pharmacopœias, or registered and licensed under this law. In the latter case the presence of potent drugs must be indicated on the label and wrapper and their quantity prescribed within limitations fixed by medical experts.

In the operation of this law, the department is pleased to note that it enjoys the co-operation and goodwill of nearly every druggist in Canada.

(8) DIVISION OF MEDICAL RESEARCH

The obtaining and installing laboratory equipment and supplies occupied the latter months of the fiscal year ended March 31, 1922, and has progressed so far as to allow of the commencement of research work.

During the coming year the activities of the division will be directed to the examination for potency of all curative sera and vaccines placed upon the Canadian market by all manufacturers of such products.

Standardization control of preparations of such drugs as ergot, digitalis, strophanthus, suprarenal glands and of pituitary body will be carried out in due course.

Bacteriological examinations of raw and canned foods, feces, milk, water, etc., will be carried out as occasion demands.

Pathological work will be largely confined to co-ordination of bacteriological requirements, although any type of work demanding special attention will be looked after.

As the organization of the laboratory proceeds, it is expected that certain lines of research will be prosecuted.

(9) DIVISION OF CHILD WELFARE

During the fiscal year under review, the Division of Child Welfare has co-operated with officials of the Department of Trade and Commerce, the Bureau of Vital Statistics, the Department of Agriculture and other departments.

The Provisional Executive Committee of "The Canadian National Council of Child Welfare," a voluntary association, intended to co-ordinate voluntary efforts for child welfare work in each and all of the provinces, held its first meeting at Ottawa on April 15, 1921, when the permanent executive committee was organized. This permanent executive committee held its first meeting at Ottawa, May 30, 1921, and arranged subsequently for "The First Annual Conference of the Canadian National Council on Child Welfare," which took place in the Windsor Hotel, Montreal, September 29 and 30, 1921.

PUBLICATIONS—GENERAL

At the meeting of the Dominion Council of Health, held in May, 1920, a unanimous request was made for original Canadian publications of a national character on maternal and child welfare. Immediate attention was given to this request and fifteen such publications have now appeared in English and seven in French. The remaining eight publications are being translated and will be issued as soon as possible. Requests for them have come in large numbers from every province and from the territories, and we are greatly indebted to the members of the Dominion Council of Health, to provincial and municipal officials, to the press, to the medical and nursing professions, to the clergy, to voluntary associations and to the general public, for their co-operation and assistance in placing our publications in the hands of Canadian fathers and mothers and others interested in child welfare.

THE CANADIAN MOTHER'S BOOK

Requests for this publication have shown no signs of falling off during the past twelve months, and further editions have been necessary, making a total issue to date of 150,000.

The Superintendent of Indian Education has requested and received twelve hundred copies of "The Canadian Mother's Book" to be distributed to mothers on the Indian reserves.

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During the week of June 13, Film No. 98 of the Canadian Government Film News Service, which has been prepared to show some pages and pictures of "The Canadian Mother's Book," was released and appeared in the Regent Theatre, Ottawa, and other theatres throughout the Dominion.

LE LIVRE DES MERES CANADIENNES

The French translation of "The Canadian Mother's Book" was published on September 23. The demand for copies has been so great that the printing of a second edition was necessary.

LITTLE BLUE BOOKS—HOME SERIES

As several mothers, in writing letters to us, gave The Canadian Mother's Book the popular name, "The Little Blue Book," it was thought suitable to adopt that name for all our publications on child welfare.

As mentioned in last year's report, the revised MSS., of the above publications was submitted in March, 1921. On May 23, a third revision was submitted, after consultation with about twenty persons, including a number of Canadian mothers and fathers in their own homes, in different provinces, as well as officials of the National Gallery of Canada, the Natural Resources Department, the Printing Bureau, the Editorial Committee and others.

New material and new ideas received subsequently rendered a fourth revision necessary, which was submitted July 1 and a fifth and final revision was approved for printing, July 13. Proofs were received and revised in August and September and the first copies of the "Home Series" of "Little Blue Books" were received in time for the meeting of the Dominion Council of Health on October 19.

In January it was found that the first ten thousand of the above publications had been exhausted. A new and revised edition of ten thousand was ordered on January 11, and two thousand were received from the Government Printing Bureau on February 28, the remainder being received in March.

COLLECTION DU FOYER—LES PETITS LIVRES BLEUS

The French translation of the Home Series of Little Blue Books was put in hand at once and proceeded with as rapidly as possible. The first five numbers of the series were received in December and the sixth on March 3. Two thousand of the above have been received. The seventh is now in press.

The total number of child welfare publications issued to the public during the year under review amounted to 365,503.

CARDS FOR DISTRICT REGISTRARS

The "Card for the Baby's Mother," first issued last year, having been approved of by the Chief Provincial Medical Officers of Health and having been used in large numbers by mothers in requesting the "Canadian Mother's Book," both English and French editions, a revised copy of the same was approved on June 20, 1921, printed by the Government Printing Bureau and distributed. The card was again revised in December and another edition of 50,000 ordered.

Up to November 30, about 55,000 of these cards had been sent to the district registrars.

RHYMING POSTERS

Permission was obtained by cable from the National League for Health, Maternity and Child Welfare, London, England, to publish for distribution in Canada the National League's Series of "Rhyming Posters." These were prepared and printed on cards in our own department and issued on request to those in charge of "Fall Fairs," or "Baby Health Demonstrations," and to others.

PICTURES AND ILLUSTRATIONS—COLLECTION OF "BOOK JACKETS"

The value of the above in our pamphlets has been shown by our experience with "The Canadian Mother's Book." It was found difficult to get the right pictures for the "Home Series of Little Blue Books," and, therefore, with the assistance of the Librarians in the Library of Parliament and the Ottawa Public Library, a collection of some hundreds of book jackets has been made, with a view to any future series of "Little Blue Books."

PUBLICITY

Publications and articles of this division have been reviewed and republished in newspapers and magazines in Canada, Great Britain, India and the United States.

DOMESTIC SANITATION

Requests have been made to the Division during the year for help in matters relating to domestic sanitation. These requests fall under two general heads:—

1. Water Supply.
2. The disposal of garbage and household waste, particularly of human excreta.

1. *Water Supply.*—The waste of time, strength and work involved in carrying into the house all water for domestic purposes, handling it several times and then carrying it out again as waste water is a serious matter. The mother in the home has too much to do and often too little help.

Efforts have been made to get information as to a suitable and economical system of water supply for the farm home and other Canadian homes, where there is no municipal supply available, and the result has served to show that this inquiry should proceed.

2. *Disposal of Garbage and Waste.*—Much information on this subject has been received from the provincial authorities and from members of the Dominion Council of Health.

HOME SERVICE

The possibility of doing something to help the mother in her daily work in her home has been kept in mind and inquiries have been made on every available opportunity.

GOITRE

The prevalence of goitre in certain districts of several of the provinces of Canada and other important facts regarding goitre, such as the greater incidence in girls than in boys, and the comparatively early age at which goitre is observed was made the subject of a memorandum in January, 1921. It was then decided that a letter should be prepared, addressed to the Chief Provincial Medical Officer of Health in each province, setting forth these facts and further stating that a discussion on goitre would take place at the next meeting of the Dominion Council of Health, and requesting that the Chief Provincial Officers of Health would make further inquiries in their respective provinces and come to the Council meeting prepared to discuss the whole matter. This letter was despatched February 6, 1922.

CHILD WELFARE IN THE EARLY HISTORY OF CANADA

Some information has been placed on file, as a result of inquiries into this subject.

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OUTPOST HOMES

The special difficulties of those who are beginning or maintaining homes on the "outposts" are great and their situation is one of national importance. There are such homes in all the provinces. Even in the oldest settled provinces we have information of homes from fifteen to twenty miles away from doctor or nurse. Conferences have been held during the year with provincial officials and others and some important information has been placed on file.

CHILDREN NEEDING SPECIAL CARE

A number of conferences have taken place with provincial officials as to industrial schools, auxiliary classes and other efforts to help children who need special care. Many requests have been made for publications in the interests of these children and their parents.

THE LIBRARY

The departmental Library has been temporarily placed under the direction of the Chief of the Division of Child Welfare, and a Reference Reading Room has been prepared and is now in use.

The following is a statement of the volumes of periodicals, etc., at present available in the Library:—

| | | |
|---|-------|-------|
| Bound volumes of medical works.. . . . | 1,545 | |
| Bound volumes of periodicals.. . . . | 275 | |
| Bound reports.. . . . | 680 | |
| Miscellaneous.. . . . | 303 | |
| | | 2,803 |
| Pamphlets not bound (approximate).. . . . | 2,000 | |
| Reports not bound.. . . . | 700 | |
| | | 2,700 |

(10) FOOD AND DRUG LABORATORIES

The following statement shows number of samples collected by the food and drug inspectors of this department and examined at the laboratories during the twelve months ended March 31, 1922:—

DISTRICTS IN WHICH COLLECTED AND EXAMINED

| Name of article | Ottawa | Halifax | Montreal | Winnipeg | Van-couver | Total samples |
|---------------------------|--------|---------|----------|----------|------------|---------------|
| Alcohol.. . . . | 2 | 3 | | | | 5 |
| Almond paste.. . . . | | | | | 1 | 1 |
| Amigo.. . . . | 1 | | | | | 1 |
| Animal products.. . . . | 6 | | | | | 6 |
| Apple cider.. . . . | 1 | | | | | 1 |
| Asthma remedy.. . . . | 1 | | | | | 1 |
| Bacon.. . . . | 1 | | 3 | | | 4 |
| Baking powder.. . . . | 9 | | 3 | | | 12 |
| Basic slag.. . . . | 9 | | | | | 9 |
| Bay rum.. . . . | 3 | | | | | 3 |
| Beans.. . . . | 36 | 5 | | 40 | 401 | 482 |
| Beer.. . . . | 2 | | | 2 | | 4 |
| Biscuits.. . . . | 1 | | | | | 1 |
| Bologna sausage.. . . . | 1 | 1 | | | | 2 |
| Borax compound.. . . . | 1 | | | 3 | | 4 |
| Brandy.. . . . | 1 | | | | | 1 |
| Bread improver.. . . . | 1 | | | | | 1 |
| Butter.. . . . | 273 | | 41 | 21 | 3 | 338 |
| Camphorated oil.. . . . | 6 | 24 | | 15 | 1 | 46 |
| Calc. acid phosph.. . . . | | 1 | | 2 | | 3 |
| Candy material.. . . . | | | | | 5 | 5 |

DISTRICTS IN WHICH COLLECTED AND EXAMINED—*Continued*

| Name of article | Ottawa | Halifax | Montreal | Winnipeg | Van-couver | Total Samples |
|-----------------------------------|--------|---------|----------|----------|------------|---------------|
| Canned corn..... | 6 | | | | 1 | 7 |
| Canned cherries..... | | | | | 1 | 1 |
| Canned fruits..... | 5 | | | | | 5 |
| Canned goods..... | 11 | | 1 | | | 12 |
| Canned peas..... | | | 1 | | 2 | 3 |
| Canned strawberries..... | | | | | 2 | 2 |
| Cans..... | 2 | | | | | 2 |
| Capsicum..... | 1 | | | | | 1 |
| Cascara..... | 1 | | | | | 1 |
| Caviar..... | | | 3 | | | 3 |
| Cayenne..... | 3 | | | | | 3 |
| Cereals..... | 6 | | | | | 6 |
| Cheese..... | 25 | | 3 | | | 28 |
| Chocolate..... | 7 | 1 | | | 3 | 11 |
| Codeine syrup..... | | | 1 | | | 1 |
| Coffee..... | 25 | | | | 1 | 26 |
| Coffee substitute..... | | | 1 | | | 1 |
| Cod liver oil..... | 5 | | | | | 5 |
| Concentrated maple extract..... | | | 1 | | | 1 |
| Cream..... | 6 | | 5 | | 4 | 15 |
| Cream of tartar..... | 3 | | | 4 | 1 | 8 |
| Currants..... | | | | 1 | | 1 |
| Custard powder..... | 1 | | | | | 1 |
| Cyder..... | 1 | | | | 1 | 2 |
| Diabetic flour..... | 4 | | | | 1 | 5 |
| Disinfectant..... | 3 | | | | | 3 |
| Drugs..... | 429 | 7 | 2 | | 75 | 513 |
| Drugs, crude..... | | 4 | | | | 4 |
| Dubbin..... | 5 | | | | | 5 |
| Dyes..... | 2 | | | | | 2 |
| Egg albumen..... | 33 | | | | 8 | 41 |
| Eggs..... | 4 | | | 1 | 31 | 36 |
| Evaporated apples..... | 1 | | | | 19 | 20 |
| Extract of ginger..... | | | 2 | | | 2 |
| Extract of lemon..... | 5 | | 2 | 1 | 3 | 11 |
| Extract of whip pwd..... | 1 | | | | | 1 |
| Feeding stuffs..... | 52 | 16 | 15 | 38 | 54 | 175 |
| Fertilizers..... | 33 | 16 | 9 | | 20 | 78 |
| Figs..... | 4 | | | | 8 | 12 |
| Fish..... | 2 | | | | 3 | 5 |
| Flavouring extract..... | 4 | 9 | | 10 | | 23 |
| Flax seed..... | 1 | | | | | 1 |
| Flour wax..... | 1 | | | | | 1 |
| Flour..... | 2 | | | | | 2 |
| Fruits, evaporated and dried..... | | | | 39 | | 39 |
| Gasoline..... | 1 | | | | | 1 |
| Gelatine..... | 31 | | | | | 31 |
| Gin..... | | | | | 1 | 1 |
| Ginger, tincture..... | | | | 12 | | 12 |
| Gluten flour..... | 2 | | | | | 2 |
| Glycerine..... | | | 13 | | | 13 |
| Ground cloves..... | 1 | | | 1 | | 2 |
| Ham and bacon..... | 6 | | 6 | | | 12 |
| Hamburg steak..... | 5 | | | | | 5 |
| Headache powders..... | 8 | | | | | 8 |
| Helps feeds..... | 1 | | | | | 1 |
| Herveys prep. med..... | 10 | | | | | 10 |
| Herring..... | 4 | | | | | 4 |
| Honey..... | 24 | | 1 | 11 | 2 | 38 |
| Hydrogen of peroxide..... | 1 | | | | | 1 |
| Ice cream..... | | | | | 1 | 1 |
| Icing sugar..... | 4 | | | | | 4 |
| Infalible oil..... | 1 | | | | | 1 |
| Infant food..... | 1 | | | | | 1 |
| Jam..... | 30 | 1 | 1 | 6 | 8 | 46 |
| Jamaica ginger..... | | 1 | | | | 1 |
| Jelly..... | 3 | | | | | 3 |
| John Collins..... | 1 | | | | | 1 |
| Ketchup..... | 33 | | 9 | | | 42 |
| Kivachwhip base..... | 1 | | | | | 1 |
| Lacquer..... | 1 | | | | | 1 |
| Lactose..... | 1 | | | | | 1 |

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DISTRICTS IN WHICH COLLECTED AND EXAMINED—Continued

| Name of article | Ottawa | Halifax | Montreal | Winnipeg | Van-couver | Total samples |
|--------------------------------------|--------|---------|----------|----------|------------|---------------|
| Lard..... | 1 | | | 9 | | 10 |
| Laying mash..... | 1 | | | | | 1 |
| Lemon squash..... | 2 | | | | | 2 |
| Lime juice..... | | 1 | | | | 1 |
| Liquor..... | 1 | | | 90 | 5 | 96 |
| Lobster..... | 4 | | 1 | 20 | | 25 |
| Lye..... | 4 | | | | | 4 |
| Magnesia of milk..... | 4 | | | | | 4 |
| Malt extract..... | 2 | | | | | 2 |
| Malto cream..... | 1 | | | | | 1 |
| Malt products..... | 4 | 13 | | | 4 | 21 |
| Malt vinegar..... | 4 | | | | | 4 |
| Mana..... | | | 2 | | | 2 |
| Maple butter..... | 2 | | | 10 | | 12 |
| Maple products..... | | 13 | | | 4 | 17 |
| Maple sugar..... | 17 | | 3 | 2 | | 22 |
| Maple syrup..... | 49 | | 12 | 18 | | 79 |
| Marmalade..... | 2 | | | | | 2 |
| Mate..... | 1 | 1 | | | | 2 |
| Meat..... | 4 | | | | | 4 |
| Medicines..... | 13 | 3 | | | 1 | 17 |
| Milk..... | 21 | 5 | 9 | 1 | 7 | 43 |
| Milk sugar..... | 1 | | | | | 1 |
| Mineral water..... | 6 | | | | | 6 |
| Molasses..... | 20 | | 9 | | | 29 |
| Molasses feeding..... | | | 1 | | | 1 |
| Monotype metal..... | 3 | | | 1 | | 3 |
| Mustard..... | 1 | | | 1 | | 2 |
| Nokit..... | 1 | | | | | 1 |
| Narcotic drugs other than opium..... | 14 | | 1 | 54 | 30 | 99 |
| Nutmeg..... | 6 | | | | | 6 |
| Oleomargarine..... | 10 | | 5 | | | 15 |
| Olive oil..... | 3 | 1 | 1 | 11 | | 16 |
| Oranges, fresh..... | | | | | 39 | 39 |
| Ovaltine..... | 1 | | | | | 1 |
| Paint..... | 11 | | | | | 11 |
| Paint oil..... | 3 | | | | | 3 |
| Panomalt..... | 3 | | | | | 3 |
| Paprinka..... | 1 | | | | | 1 |
| Pain killer..... | | | 1 | | 1 | 2 |
| Papine..... | | | | | 1 | 1 |
| Pepper, black..... | 16 | | 3 | | | 19 |
| Pepper, white..... | 20 | | 7 | | | 27 |
| Pepper, ground..... | | | | 26 | | 26 |
| Pepper, shells..... | 2 | | | | | 2 |
| Pharamalt..... | 1 | | | | | 1 |
| Pharmalt dextrose maltose..... | 1 | | | | | 1 |
| Pie filler..... | 1 | | | | | 1 |
| Poison..... | 1 | | | | | 1 |
| Polish cream..... | 1 | | | | | 1 |
| Ponzo..... | 1 | | 1 | | | 2 |
| Pork and beans..... | 4 | | | | | 4 |
| Prairie wash..... | 1 | | | | | 1 |
| Preservatives..... | 1 | | | | | 1 |
| Raisins..... | | | | 3 | | 3 |
| Rice mash..... | | | | | 2 | 2 |
| Rice and yeast mixt..... | | | | | 1 | 1 |
| Root beer..... | 1 | | | | | 1 |
| Rum..... | 1 | | | | | 1 |
| Salad oil..... | 1 | | | | | 1 |
| Salmon..... | 4 | | | 2 | | 6 |
| Salt petre..... | 1 | | | | | 1 |
| Sausages..... | 123 | | 19 | 27 | 15 | 184 |
| Sausage color..... | 4 | | | | | 4 |
| Seidlitz powder..... | 1 | | | | | 1 |
| Shoe blacking..... | 3 | | | | | 3 |
| Shorts..... | 1 | | | | | 1 |
| Silk..... | 3 | | | | | 3 |
| Smoked fish..... | 1 | | | 2 | | 2 |
| Smoke essence..... | 1 | | | | | 1 |
| Soap..... | 26 | | | | | 26 |
| Sodium carbonate..... | | | | | 1 | 1 |

DISTRICTS IN WHICH COLLECTED AND EXAMINED—*Concluded*

| Name of article | Ottawa | Halifax | Montreal | Winnipeg | Vancouver | Total samples |
|-----------------------------|--------|---------|----------|----------|-----------|---------------|
| Spirits of nitre..... | 4 | | | 11 | | 15 |
| Strychnine sulphate..... | | | | 1 | | 1 |
| Sugar..... | 9 | | | | 44 | 53 |
| Syrup..... | 25 | | | | | 25 |
| Syrup of hypophos..... | 8 | | | | | 8 |
| Tatrazine..... | 2 | | | | | 2 |
| Tea..... | 1 | | | | | 1 |
| Tincture of gentian..... | | | 1 | | | 1 |
| Tincture of iodine..... | 1 | | | | 13 | 14 |
| Tincture methyl orange..... | 1 | | | | | 1 |
| Tincture of opium..... | 1 | | | | | 1 |
| Tincture of orange..... | 1 | | | | | 1 |
| Tirch flour..... | 1 | | | | | 1 |
| Tissue..... | 2 | | | | | 2 |
| Tobacco..... | 1 | | | | | 1 |
| Tonique wines..... | 71 | | 5 | | 1 | 77 |
| Vanilla extract..... | 2 | | | | 10 | 12 |
| Vegetable soup..... | 4 | | | | | 4 |
| Vinegar..... | 3 | 20 | | 64 | 22 | 109 |
| Walnuts..... | | | | | 29 | 29 |
| Water..... | 13 | 4 | | | | 17 |
| Weiners..... | 2 | | | | | 2 |
| Wheat..... | 1 | | | | | 1 |
| Wheat bran..... | | | | | 3 | 3 |
| Wheat shorts..... | | | | | 5 | 5 |
| White middlings..... | 1 | | | | 1 | 2 |
| White powder..... | 1 | | | | | 1 |
| Wines..... | 16 | | | 13 | 2 | 31 |
| | 1,831 | 150 | 204 | 572 | 902 | 3,659 |

During the war, large quantities of beans known as Burma or Rangoon beans were being imported. This variety of bean often contains hydrocyanic (prussic) acid in dangerous amounts. All importations of such beans were examined and, if any of the samples showed more than 20 milligrams of hydrocyanic acid per 100 grams of beans, they were refused entry into the country. As a result of this examination and rejection when necessary, this variety of bean is not now being imported. The most of these samples were examined at Vancouver, as this is the main port of entry from the Orient.

The large number of butter samples reported are nearly all submitted by the Department of Agriculture dairy inspectors and fee of analysis paid for same.

During the winter season, fresh Chinese eggs were being imported and complaint was made that their quality was inferior.

The matter was referred to the Egg Branch of the Department of Agriculture but as their law and regulations did not cover the importation of foreign eggs, they were examined under section 7 (2) of the Food and Drugs Act and they were found to violate section 3 (1) (d), which reads as follows:—

“Food shall be deemed to be adulterated within the meaning of this Act if it consists wholly or in part of any diseased or putrid or rotten animal or vegetable substance, whether manufactured or not”.

A large shipment of these eggs was refused entry at Vancouver as being unfit for food under the above quoted section. A large percentage was bad and the shipment was subsequently exported to the United States.

During the month of January, the citrus crops in California were frosted and the United States federal food officials examined shipments of oranges in interstate trade, and found that the frost had so damaged many of these as to make them unfit for use as, when oranges are frosted and show more than a 20 per cent shrinkage in 15 per cent of the samples examined, they are deemed to be unsound and unfit for

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ordinary use. Following advices received from the United States federal authorities, incoming shipments were examined by the officials of this department and, where found to be damaged by frost, entry into Canada was forbidden. In one case where a consignment of oranges entered Canada and was found to be so damaged, destruction was ordered and carried out.

Following upon complaints regarding the composition of coffee, molasses and soft drinks, special collections of these articles were made and examined as follows:—

| Name of article | In what district collected | | | | | Total |
|------------------|----------------------------|---------|----------|----------|------------|-------|
| | Ottawa | Halifax | Montreal | Winnipeg | Van-couver | |
| Coffee..... | 72 | 26 | 5 | 29 | ..... | 132 |
| Molasses..... | 285 | 41 | ..... | 43 | 47 | 416 |
| Soft drinks..... | 1,182 | ..... | ..... | ..... | ..... | 1,182 |

A collection of coffee was made in the province of Quebec, following a complaint that much of the so-called coffee offered for sale was a mixture containing chicory, roasted grain; the result of analysis sustained the complaint. Legal action was taken in all cases found to violate the law and penalties imposed. Many of the smaller storekeepers in country places desire to sell a so-called cheap coffee and they are furnished with a compound article which, as a rule, the furnisher sells correctly marked but the retailer, either through carelessness or ignorance, sells as coffee and thereby gets into trouble.

The remarks above regarding coffee apply to the collection of molasses. The adulteration complained of in molasses was the addition of glucose, which is deemed to be the substitution of a cheaper or inferior article, in some cases to the extent of 50 per cent and sold as molasses instead of as molasses compound.

Our regulations require that all added colour in soft drinks (except caramel), be declared on the label; also if saccharine replaces sugar as a sweetener, this has to be declared. Our examination showed that many soft drinks were on the market which contained both added colour and saccharine without declaration, and all manufacturers whose goods did not comply with the law were warned that if on further examination, they are found violating the Act, action will be taken to enforce the law by applying penalties.

The total number of prosecutions entered for violation of the Food and Drugs Act during the year 1921-22 is 225. Of this number 203 have been completed, leaving 22 in progress:—

| | | | |
|-------------------------|------------|-----------------------------------|-----|
| Baking powder.. . . . | 2 | Obstructing officer.. . . . | 1 |
| Butter.. . . . | 1 | Pepper.. . . . | 10 |
| Camphorated oil.. . . . | 4 | Personating.. . . . | 1 |
| Cloves.. . . . | 2 | Sausages.. . . . | 49 |
| Coffee.. . . . | 23 | Spirits of camphor.. . . . | 15 |
| Cream.. . . . | 3 | Sugar.. . . . | 1 |
| Glycerin.. . . . | 1 | Sweet spirit of nitre.. . . . | 1 |
| Icing sugar.. . . . | 1 | Tincture benzoin compound.. . . . | 2 |
| Ketchup.. . . . | 8 | Tincture of iodine.. . . . | 23 |
| Maple sugar.. . . . | 4 | Vinegar.. . . . | 2 |
| Maple syrup.. . . . | 6 | Whiskey.. . . . | 1 |
| Molasses.. . . . | 64 | | |
| | 119 | | 106 |
| | Total: 225 | | |

RÉSUMÉ

| | |
|----------------------------------|-----|
| Incomplete.. . . . | 22 |
| Appealed.. . . . | 4 |
| Convictions.. . . . | 68 |
| Convictions of furnisher.. . . . | 15 |
| Voluntary payments.. . . . | 96 |
| Dismissed by court.. . . . | 1 |
| Withdrawn.. . . . | 19 |
| | 225 |

(11) FINANCIAL STATEMENT

STATEMENT OF EXPENDITURE FOR THE FISCAL YEAR 1921-22

| Service | Gross Expenditure | Refunds to Appropriations | Net Expenditure |
|---|----------------------|------------------------------|--------------------|
| | \$ cts. | \$ cts. | \$ cts. |
| The administration of the acts respecting food and drugs, honey and maple products, and opium and narcotic drugs..... | 82,413 45 | 2,414 60 | 79,998 85 |
| Proprietary or patent medicines..... | 4,379 10 | | 4,379 10 |
| Marine hospitals, including grants to institutions assisting sailors..... | 95,504 24 | 4,328 06 | 91,176 18 |
| Quarantine; salaries and contingencies of organized districts; public health in other districts; Tracadie and D'Arcy Island Lazarettoes; Public Works Health Act..... | 263,116 97 | 1,762 09 | 261,354 88 |
| Immigration medical inspection..... | 50,036 35 | 38 64 | 49,997 71 |
| Research; maintenance, replacements, supplies and assistance for a research laboratory..... | 4,373 09 | | 4,373 09 |
| Venereal diseases..... | 195,313 37 | | 195,313 37 |
| Medical Research Committee..... | 1,387 45 | | 1,387 45 |
| Civil government..... | 135,531 10 | | 135,531 10 |
| “ ” contingencies..... | 70,306 17 | 2,769 20 | 67,536 97 |
| Provisional bonus allowance..... | 33,904 81 | 443 44 | 33,461 37 |
| Miscellaneous gratuities..... | 494 97 | | 494 97 |
| Reclassification arrears..... | 13,915 39 | | 13,915 39 |
| Superannuation No. 4..... | 665 33 | | 665 33 |
| Canadian National Council of Child Welfare..... | 1,000 00 | | 1,000 00 |
| | 952,341 79 | 11,756 03 | 940,585 76 |

STATEMENT OF REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL
YEAR ENDED MARCH 31, 1922

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|------------------|----------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| “A”—Food and drugs..... | 9,807 65 | | 9,807 65 |
| “B”—Opium and narcotic drugs..... | 30,787 77 | 954 95 | 29,832 82 |
| “C”—Fertilizers..... | 276 00 | | 276 00 |
| “D”—Patent medicines..... | 7,197 45 | 72 00 | 7,125 45 |
| “E”—Sick mariners' dues..... | 132,307 03 | 579 88 | 131,727 15 |
| “F”—Casual revenue..... | 2,134 38 | | 2,134 38 |
| Total..... | 182,510 28 | 1,606 83 | 180,903 45 |

“A”—FOOD AND DRUGS REVENUE FOR 1921-1922

| | Analysis | Fines and forfeitures | Costs | Total |
|-----------------------|----------|-----------------------------|----------|----------|
| Nova Scotia..... | 67 00 | | | 67 00 |
| New Brunswick..... | 44 00 | 75 00 | 30 00 | 149 00 |
| Quebec..... | 125 00 | 2,970 00 | 1,425 00 | 4,520 00 |
| Ontario..... | 2,629 15 | 900 00 | 305 00 | 3,834 15 |
| Manitoba..... | 161 00 | 200 00 | 80 00 | 441 00 |
| Saskatchewan..... | 25 15 | 25 00 | 10 00 | 60 15 |
| Alberta..... | 18 00 | | | 18 00 |
| British Columbia..... | 149 35 | 250 00 | 310 00 | 709 35 |
| Foreign..... | 9 00 | | | 9 00 |
| Total..... | 3,227 65 | 4,420 00 | 2,160 00 | 9,807 65 |

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"B"—OPIUM AND NARCOTIC DRUGS REVENUE FOR 1921-1922

| | Business Licenses | Import Licenses | Export Licenses | Fines and Forfeitures | Total |
|---------------------------|----------------------|--------------------|--------------------|--------------------------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 120 00 | | | 9 83 | 129 83 |
| New Brunswick..... | 140 00 | | | 1,500 00 | 1,640 00 |
| Prince Edward Island..... | 5 00 | | | | 5 00 |
| Quebec..... | 1,075 00 | 500 00 | 25 00 | 9,174 04 | 10,774 04 |
| Ontario..... | 1,070 00 | 215 00 | 25 00 | 1,478 50 | 2,788 50 |
| Manitoba..... | 265 00 | | | 700 00 | 965 00 |
| Saskatchewan..... | 70 00 | | | 3,971 80 | 4,041 80 |
| Alberta..... | 175 00 | | | 3,330 00 | 3,505 00 |
| British Columbia..... | 110 00 | | | 6,773 60 | 6,883 60 |
| Foreign..... | 55 00 | | | | 55 00 |
| | 3,085 00 | 715 00 | 50 00 | 26,937 77 | 30,787 77 |
| Less refunds..... | 5 00 | | | 949 95 | 954 95 |
| Total..... | 3,080 00 | 715 00 | 50 00 | 25,987 82 | 29,832 82 |

"C"—FERTILIZERS REVENUE FOR 1921-1922

| | Licenses | Brands | Total |
|-----------------------|----------|--------|--------|
| Nova Scotia..... | | 2 00 | 2 00 |
| New Brunswick..... | 48 00 | 2 00 | 50 00 |
| Quebec..... | 56 00 | 12 00 | 68 00 |
| Ontario..... | 88 00 | 8 00 | 96 00 |
| British Columbia..... | 8 00 | 2 00 | 10 00 |
| Foreign..... | 40 00 | 10 00 | 50 00 |
| Total..... | 240 00 | 36 00 | 276 00 |

"D"—PATENT MEDICINES REVENUE FOR 1921-1922

| | Fines | Registration Fees | License Fees | Total |
|---------------------------|--------|----------------------|-----------------|----------|
| Nova Scotia..... | | 80 00 | 61 00 | 141 00 |
| New Brunswick..... | | 20 00 | 127 00 | 147 00 |
| Prince Edward Island..... | | 2 00 | 1 00 | 3 00 |
| Quebec..... | 205 00 | 804 00 | 1,557 00 | 2,566 00 |
| Ontario..... | 67 45 | 672 00 | 1,857 00 | 2,596 45 |
| Manitoba..... | | 32 00 | 101 00 | 133 00 |
| Saskatchewan..... | | 24 00 | 31 00 | 55 00 |
| Alberta..... | | 32 00 | 38 00 | 70 00 |
| British Columbia..... | | 86 00 | 142 00 | 228 00 |
| Foreign..... | | 350 00 | 908 00 | 1,258 00 |
| | 272 45 | 2,102 00 | 4,823 00 | 7,197 45 |
| Less refunds..... | | 32 00 | 40 00 | 72 00 |
| Total..... | 272 45 | 2,070 00 | 4,783 00 | 7,125 45 |

"E"—SICK MARINERS' DUES REVENUE FOR 1921-1922

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|---------|----------------|
| Nova Scotia..... | 31,744 57 | 188 42 | 31,556 15 |
| New Brunswick..... | 15,740 56 | 4 00 | 15,736 56 |
| Prince Edward Island..... | 525 00 | 0 54 | 524 46 |
| Quebec..... | 42,630 07 | 280 86 | 42,349 21 |
| British Columbia..... | 41,666 83 | 106 06 | 41,560 77 |
| Total..... | 132,307 03 | 579 88 | 131,727 15 |

"F"—CASUAL REVENUE FOR 1921-1922

Collections for treatment of sick mariners in 1920-21
and 1919-20—

| | | |
|--|----------|------------|
| Department of Naval Service.. . . . | \$ 19 00 | |
| Department of Marine and Fisheries.. . . . | 17 00 | |
| Department of Public Works.. . . . | 160 43 | |
| | | \$ 196 43 |
| Adjustments of bonus due to classification.. . . . | | 789 83 |
| Miscellaneous refunds to previous years appropriations.. . . . | | 101 89 |
| Fumigation certificates.. . . . | | 15 00 |
| Sale of boat.. . . . | | 1,000 00 |
| Sundry sales.. . . . | | 7 83 |
| Exchange premiums.. . . . | | 23 40 |
| Total.. . . . | | \$2,134 38 |

STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at each
Port and Outport

PROVINCE OF NOVA SCOTIA.

| Port and Outports. | Net Revenue. | Port and Outports. | Net Revenue. |
|----------------------------|-----------------|--------------------------|-----------------|
| Amherst.. . . . | \$ | Halifax.. . . . | 22,793 38 |
| River Hebert.. . . . | 9 10 | Sheet Harbour.. . . . | 17 86 |
| Pugwash.. . . . | 9 64 | Spry Bay.. . . . | 4 00 |
| Joggins Mines.. . . . | 35 88 | Ingramport.. . . . | 27 98 |
| | | East Jeddore.. . . . | 2 00 |
| | 54 62 | Moser's River.. . . . | 0 26 |
| Annapolis Royal.. . . . | 11 04 | | 22,845 48 |
| Clementsport.. . . . | 5 94 | Kentville.. . . . | 2 20 |
| Port Wade.. . . . | 2 98 | Kingsport.. . . . | 121 38 |
| Bridgetown.. . . . | 5 96 | Wolfville.. . . . | 2 88 |
| | 25 92 | | 126 46 |
| Arichat.. . . . | 11 64 | Liverpool.. . . . | 144 28 |
| St. Peters.. . . . | 2 00 | Port Medway.. . . . | 4 00 |
| Petit de Grat.. . . . | 12 00 | Port Mouton.. . . . | 4 00 |
| River Bourgeois.. . . . | 8 00 | | 152 28 |
| Descousse.. . . . | 4 36 | Lockport.. . . . | 49 30 |
| | 38 00 | Lunenburg.. . . . | 593 24 |
| Baddeck.. . . . | 6 94 | LaHave.. . . . | 307 14 |
| Munroe's Point.. . . . | 243 64 | Mahone Bay.. . . . | 12 56 |
| New Campbellton.. . . . | 13 42 | Riverport.. . . . | 24 62 |
| | 264 00 | | 937 56 |
| Barrington Passage.. . . . | 8 00 | North Sydney.. . . . | 1,233 22 |
| Woods Harbour.. . . . | 10 00 | Parrsboro.. . . . | 165 26 |
| Clark's Harbour.. . . . | 10 06 | Apple River.. . . . | 84 48 |
| | 28 06 | Port Greville.. . . . | 30 02 |
| Bridgewater.. . . . | 16 83 | Spencer's Island.. . . . | 19 86 |
| Canso.. . . . | 29 83 | Advocate Harbour.. . . . | 5 20 |
| Liscomb.. . . . | 2 00 | Five Islands.. . . . | 5 82 |
| Larry's River.. . . . | 4 00 | | 310 64 |
| Queensport.. . . . | 3 14 | Pictou.. . . . | 75 51 |
| Port Mulgrave.. . . . | 2 96 | Port Hawkesbury.. . . . | 91 86 |
| | 41 93 | Port Hastings.. . . . | 14 34 |
| Digby.. . . . | 150 36 | | 106 20 |
| Bear River.. . . . | 12 08 | | |
| Westport.. . . . | 18 20 | | |
| Freeport.. . . . | 19 82 | | |
| Tiverton.. . . . | 2 00 | | |
| | 202 46 | | |

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STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at each Port and Outport.—*Continued.*PROVINCE OF NOVA SCOTIA—*Concluded.*

| Port and Outports. | Net Revenue. | Port and Outports. | Net Revenue. |
|------------------------------|--------------|----------------------------|--------------|
| Port Hood.. | | Weymouth.. | 15 70 |
| Cheticamp.. | 20 54 | Church Point.. | 3 08 |
| Margaree.. | 6 00 | Meteghan.. | 12 88 |
| Grand Etang.. | 6 00 | Belliveau's Cove.. | 49 36 |
| | 32 54 | Salmon River.. | 4 00 |
| | | | 85 02 |
| Shelburne.. | 30 92 | Windsor.. | 533 98 |
| North East Harbour.. | 0 68 | Walton.. | 428 47 |
| Sandy Point.. | 45 28 | Hantsport.. | 572 72 |
| | 76 88 | Noel.. | 8 60 |
| | | | 1,543 77 |
| Sydney.. | 2,472 13 | Yarmouth.. | 437 46 |
| Louisburg.. | 362 64 | Pubnico.. | 18 26 |
| | 2,834 77 | Wedgeport.. | 4 94 |
| | | Abbott's Harbour.. | 6 00 |
| Truro.. | | Port Maitland.. | 2 00 |
| Little Bass River.. | 6 04 | | 468 66 |
| | 6 04 | | |

PROVINCE OF NEW BRUNSWICK.

| | | | |
|-------------------------|--------|--------------------------|-----------|
| Bathurst.. | 133 46 | Newcastle.. | 126 70 |
| Caraquet.. | 2 00 | Sackville.. | |
| Shippegan.. | 2 00 | Port Elgin.. | 3 35 |
| | 137 46 | | 3 35 |
| Campbellton.. | 278 89 | St. Andrews.. | 34 56 |
| Dalhousie.. | 63 14 | Grand Harbour.. | 14 00 |
| Jacquet River.. | 3 54 | North Head.. | 35 92 |
| | 345 57 | Lord's Cove.. | 32 00 |
| Chatham.. | 334 80 | Wilson's Beach.. | 2 00 |
| Richibucto.. | 4 72 | | 118 48 |
| Buctouche.. | 18 32 | St. John.. | 14,103 88 |
| | 357 84 | St. George.. | 40 02 |
| Fredericton.. | 11 62 | St. Martins.. | 135 38 |
| | | Beaver Harbour.. | 14 00 |
| Moncton.. | 7 64 | Chance Harbour.. | 6 00 |
| Hillsboro.. | 223 02 | | 14,299 28 |
| Alma.. | 35 40 | St. Stephen.. | 68 20 |
| Albert.. | 2 00 | | |
| | 268 06 | | |

PROVINCE OF PRINCE EDWARD ISLAND.

| | | | |
|--------------------------|--------|----------------------|-------|
| Charlottetown.. | 309 37 | Summerside.. | 64 44 |
| Souris.. | 52 12 | Miminegash.. | 10 00 |
| Crapaud.. | 5 04 | Alberton.. | 13 30 |
| Murray Harbour.. | 9 04 | Tignish.. | 1 07 |
| Georgetown.. | 22 76 | | 88 81 |
| Montague.. | 33 32 | | |
| New London.. | 4 00 | | |
| | 435 65 | | |

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STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at each Port and Outport.—*Concluded.*

PROVINCE OF QUEBEC.

| Port and Outports. | Net Revenue. | Port and Outports. | Net Revenue. |
|------------------------------|--------------|------------------------|--------------|
| Gaspé.. | 64 04 | Rimouski.. | 23 10 |
| Ste Anne des Monts.. | 78 60 | Matane.. | 74 42 |
| | 142 64 | | 97 52 |
| Montreal.. | 34,531 92 | Sorel.. | 5 80 |
| Paspebiac.. | 184 92 | St. Johns.. | 931 67 |
| Carleton.. | 2 00 | Three Rivers.. | 322 46 |
| Port Daniel.. | 7 68 | | |
| | 194 60 | | |
| Perce.. | 0 54 | | |
| Quebec.. | 4,986 80 | | |
| Seven Islands.. | 169 30 | | |
| Magdalene Islands.. | 50 98 | | |
| Levis.. | 67 58 | | |
| Montmagny.. | 20 04 | | |
| Bonne Esperance.. | 59 52 | | |
| Chicoutimi.. | 136 84 | | |
| Port Alfred.. | 631 00 | | |
| | 6,122 06 | | |

PROVINCE OF BRITISH COLUMBIA.

| | | | |
|---------------------------|----------|---------------------------|-----------|
| Nanaimo.. | 1,220 96 | Vancouver.. | 22,870 35 |
| Chemainus.. | 153 70 | Alert Bay.. | 16 72 |
| Union Bay.. | 707 80 | Powell River.. | 146 92 |
| Ladysmith.. | 510 54 | Britannia Beach.. | 33 84 |
| Port Alberni.. | 294 70 | | 23,067 83 |
| | 2,887 70 | | |
| New Westminster.. | 318 46 | Victoria.. | 14,173 57 |
| White Rock.. | 21 54 | Tofino.. | 7 54 |
| Steveston.. | 2 00 | Sidney.. | 108 34 |
| | 342 00 | Bamfield.. | 6 00 |
| | | Quatsino.. | 153 04 |
| Prince Rupert.. | 471 37 | Port Renfrew.. | 13 62 |
| Anyox.. | 46 16 | | 14,462 11 |
| Ocean Falls.. | 283 60 | | |
| | 801 13 | | |

Respectfully submitted,

J. A. AMYOT,

Deputy Minister of Health.

REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE
FISCAL YEAR ENDED MARCH 31, 1923

PRINTED BY ORDER OF PARLIAMENT



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1923

*To General His Excellency the Right Honourable Lord Byng of Vimy, G.C.B.,
G.C.M.G., M.V.O., Governor General and Commander in Chief of the
Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit, herewith, for the information of Your Excellency and the Parliament of Canada the Annual Report of the Department of Health, being for the year ended March 31, 1923.

I have the honour to be, sir,

Your Excellency's most obedient servant,

H. S. BÉLAND,
Minister of Health.

OTTAWA, September 15, 1923.

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REPORT OF THE DEPARTMENT OF HEALTH

FOR THE FISCAL YEAR ENDED MARCH 31, 1923

OTTAWA, September 1, 1923.

Honourable H. S. BÉLAND, M.D.,
Minister of Health,
Ottawa.

SIR,—I have the honour to report on the Department of Health for the year ended March 31, 1923, under the following headings:—

1. Quarantine Service.
2. Immigration Medical Service.
3. Marine Hospitals Service.
4. Venereal Disease Control.
5. Housing, with Hospitalization and Sanitation.
6. Opium and Narcotic Drugs.
7. Proprietary or Patent Medicines.
8. Child Welfare.
9. Food and Drug Laboratories.
10. Public Works Health Act.
11. Financial Statement.

J. A. AMYOT,
Deputy Minister of Health.

(1) QUARANTINE SERVICE

Organized Quarantine Stations were kept in operation at Charlottetown, P.E.I.; Chatham, N.B. (Middle Island); Halifax, N.S. (Lawlor's Island); Louisburg, N.S.; North Sydney, N.S.; Quebec, Que. (Grosse Isle); St. John, N.B. (Partridge Island); and Victoria, B.C. (William Head).

The total number of vessels which reported at the various stations was 1,897 and the number of persons inspected 289,292, made up as follows:—

| | | | |
|------------------------|----------------|--------|---------|
| Passengers | 1st class..... | 21,032 | |
| | 2nd class..... | 41,467 | |
| | Steerage..... | 74,503 | |
| | | | <hr/> |
| | | | 137,007 |
| Crews..... | | | 151,828 |
| Cattlemen..... | | | 266 |
| Stowaways..... | | | 149 |
| Distressed seamen..... | | | 42 |
| | | | <hr/> |
| Total..... | | | 289,292 |

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DISTRIBUTION OF VESSELS INSPECTED

| Stations | Vessels |
|---------------------------|---------|
| Charlottetown, P.E.I..... | 3 |
| Chatham, N.B..... | 11 |
| Halifax, N.S..... | 305 |
| Louisburg, N.S..... | 15 |
| North Sydney, N.S..... | 106 |
| Quebec, Que..... | 903 |
| St. John, N.B..... | 269 |
| Victoria, B.C..... | 285 |
| Total..... | 1,897 |

DISTRIBUTION OF PERSONNEL INSPECTED

| — | Char- lottetown | Chatham | Halifax | Louis- burg | North Sydney | Quebec | St. John | Vic- toria | Total |
|---------------------------|--------------------|---------|---------|----------------|-----------------|---------|-------------|---------------|---------|
| <i>Passengers</i> | | | | | | | | | |
| 1st class..... | | | 6,507 | | 9 | 5,529 | 1,501 | 7,486 | 21,032 |
| 2nd class..... | | | 2,365 | | | 31,766 | 4,098 | 3,238 | 41,467 |
| Steerage..... | | | 13,987 | | | 32,837 | 12,716 | 14,968 | 74,508 |
| Crews..... | 49 | 247 | 22,859 | | 9 | 70,132 | 18,315 | 25,692 | 137,007 |
| Cattlemen..... | | | 23,178 | 522 | 3,299 | 71,438 | 18,326 | 34,769 | 151,828 |
| Stowaways..... | | | 30 | | 5 | 254 | 12 | | 266 |
| Distressed seamen..... | | | 38 | | | 91 | 20 | | 149 |
| Total..... | 49 | 247 | 46,105 | 525 | 3,313 | 141,915 | 36,677 | 60,461 | 289,292 |

The total number of persons admitted to the quarantine hospitals and detention buildings was 638, distributed as follows:—

| | |
|--------------------|-----|
| Halifax, N.S..... | 49 |
| Quebec, Que..... | 439 |
| St. John, N.B..... | 74 |
| Victoria, B.C..... | 76 |
| Total..... | 638 |

Of these 638 persons, 128 were actually sick; the balance of 510 was made up of contacts and persons accompanying the sick, including 331 detained as possible smallpox contacts. Tabulated statements follow showing the distribution by stations of hospital cases, etc., also their classification by disease.

The total number of days in hospital and detention buildings was 6,075, viz., 1,894 for the sick and 4,181 for the contacts, etc.

DISTRIBUTION OF HOSPITAL CASES

| Stations | Sick | Hospital days | Contacts and persons accom- panying sick | Hospital days | Persons detained for ob- servation including smallpox contacts | Hospital days | Total persons detained | Total hospital days |
|---------------|------|------------------|---|------------------|--|------------------|------------------------------|---------------------------|
| Halifax..... | 15 | 301 | 6 | 89 | 28 | 168 | 49 | 558 |
| Quebec..... | 86 | 1,170 | 134 | 1,439 | 219 | 1,457 | 439 | 4,066 |
| St. John..... | 20 | 303 | 31 | 391 | 23 | 69 | 74 | 763 |
| Victoria..... | 7 | 120 | 8 | 109 | 61 | 459 | 76 | 688 |
| Total..... | 128 | 1,894 | 179 | 2,028 | 331 | 2,153 | 638 | 6,075 |

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CLASSIFICATION OF HOSPITAL CASES BY DISEASES

| Diseases | Sick | Hospital days | Contacts etc. | Hospital Days | Total persons detained | Total hospital days |
|------------------------------------|------|---------------|---------------|---------------|------------------------|---------------------|
| Acute cold* | 1 | 7 | 3 | 21 | 4 | 28 |
| Adenitis..... | 1 | 6 | | | 1 | 6 |
| Bronchitis..... | 5 | 58 | 1 | 16 | 6 | 74 |
| Broncho-pneumonia..... | 1 | 20 | 2 | 40 | 3 | 60 |
| Chronic constipation*..... | 1 | 15 | 2 | 30 | 3 | 45 |
| Chickenpox..... | 8 | 91 | 13 | 135 | 21 | 226 |
| Dermatitis*..... | 2 | 14 | 2 | 14 | 4 | 28 |
| Dental abscesses*..... | 1 | 5 | 5 | 25 | 6 | 30 |
| Diphtheria..... | 8 | 94 | 15 | 197 | 23 | 291 |
| Erysipelas..... | 1 | 6 | 1 | 6 | 2 | 12 |
| Erythema simplex*..... | 1 | 5 | 2 | 10 | 3 | 15 |
| German measles..... | 3 | 25 | 7 | 70 | 10 | 95 |
| Gastro-intestinal disorder*..... | 1 | 8 | 1 | 8 | 2 | 16 |
| Influenza..... | 1 | 13 | 5 | 65 | 6 | 78 |
| Intestinal toxemia*..... | 2 | 8 | 4 | 16 | 6 | 24 |
| Measles..... | 59 | 902 | 81 | 1,007 | 140 | 1,909 |
| Mumps..... | 3 | 28 | 4 | 30 | 7 | 58 |
| Observation—Smallpox contacts..... | | | 331 | 2,153 | 331 | 2,153 |
| Pharyngitis*..... | 1 | 5 | | | 1 | 5 |
| Pneumonia*..... | 1 | 3 | | | 1 | 3 |
| Pyrexia (unknown origin)..... | 1 | 2 | 3 | 6 | 4 | 8 |
| Round worms*..... | 1 | 8 | 5 | 40 | 6 | 48 |
| Relapsing fever*..... | 3 | 159 | | | 3 | 159 |
| Scabies..... | 4 | 120 | 2 | 60 | 6 | 180 |
| Scarlet fever..... | 9 | 206 | 8 | 122 | 17 | 323 |
| Smallpox..... | 2 | 31 | 3 | 38 | 5 | 69 |
| Teething rash*..... | 1 | 6 | 6 | 36 | 7 | 42 |
| Tonsilitis*..... | 5 | 44 | 4 | 36 | 9 | 80 |
| Urticaria*..... | 1 | 5 | | | 1 | 5 |
| Totals..... | 128 | 1,894 | 510 | 4,181 | 638 | 6,075 |

*These cases were landed at Quarantine for observation on account of pyrexia, indicating possible infectious disease. Conditions were later diagnosed as stated.

One thousand seven hundred and seventy-two persons were vaccinated in accordance with the Quarantine Regulations, as follows:—

| | |
|----------------------------------|-------|
| Quebec (Grosse Isle)..... | 1,024 |
| Halifax (Lawlor's Island)..... | 28 |
| St. John (Partridge Island)..... | 49 |
| Victoria (William Head)..... | 671 |
| Total..... | 1,772 |

Notwithstanding serious epidemics of infectious diseases in countries of Europe and the Orient from which a large percentage of the passenger traffic to Canada originated, the graver quarantinable diseases were met with in but two instances, viz., one case of smallpox at Quebec, and one at William Head. These are referred to in detail in the respective reports of the medical superintendent of these stations.

Grosse Isle, Quebec.—Dr. G. E. Martineau, Medical Superintendent of the St. Lawrence Quarantine Service, writes as follows:—

“There were 903 steamers cleared at the station during the last navigation season (1922), being 201 more than the preceding season, an increase of about 29 per cent. The average number of steamers cleared per season during the past 21 years was 392, so that this season's work is about 130 per cent more than the average. Of the 903 vessels inspected, 155 or 17 per cent were passenger steamers. The total number of persons examined was 141,915 an increase of 5,887 over last year. So far as passengers are concerned, however, as distinct

from crews, while there was an increase of 41 in the number of passenger ships inspected over last season, there was an actual decrease in the number of passengers examined of 9,727 as compared with 1921.

"Sick were landed at the Quarantine Station on forty (40) different occasions. In four instances, on the ss. *Andania*, *Tunisian*, *Canada*, and *Empress of Britain*, third-class passengers who had refused vaccination during the voyage were vaccinated at quarantine.

"The ss. *Lake Winthrop*, with crew of 33, arriving here June 21, with an unclean bill of health from La Romana, West Indies, was held for three days to complete the period of incubation of variola (smallpox) which was epidemic at her sailing port. The captain claimed that his crew had been vaccinated before embarkation, on June 8, but no evidence being apparent of the vaccine having taken, they were revaccinated at quarantine and kept under observation as above stated.

"The ss. *Penrhydd*, from Dakes, West Africa arrived at the station on October 3 with one death from and three cases of pneumonia among his crew of 31. As this appeared to be a complication of either influenza or bubonic plague, the vessel was held pending a diagnosis through bacteriological examination, which revealed the presence in throat swabs of small bacilli having the form and dimensions of *B. Pfeiffer*. The steamer was then thoroughly fumigated and the crew disinfected and kept under observation for four days, at the expiration of which they were released, no new cases having developed in the interval. The three cases admitted to hospital turned into relapsing fever, and it was not before November 24 that they could be discharged.

"On November 18, the ss. *Montclair* from Liverpool, with 221 cabin, 492 steerage passengers, and 269 crew arrived at quarantine with one case of variola (smallpox) among the cabin passengers. The patient and two immediate contacts were admitted to hospital for treatment and observation, while the other 218 passengers and 47 members of crew of the same section were landed for quarantine and observation at the western end of the island. The apartment occupied by the patient having been disinfected, the remaining 222 crew and steerage passengers were all vaccinated and allowed to proceed with the vessel after a detention of 31 hours. No new cases developed among the persons detained under observation, who were released in groups as soon as vaccination was successful or immunity reaction manifested itself; the last group, including the patient, who recovered promptly, being discharged on December 2.

"There were 220 persons admitted to the hospital during the season, which is 222 admissions and 1,947 hospital days less than last year. Of these 220 admissions, 86 were patients and 134 were contact or persons accompanying the sick.

"With regard to nationality they were divided as under:—

| | | | |
|----------------|-----|-----------------|---|
| Canadian..... | 8 | Serbian..... | 2 |
| British..... | 128 | Swedish..... | 1 |
| French..... | 1 | Norwegian..... | 1 |
| Italian..... | 2 | Hungarian..... | 1 |
| Polish..... | 57 | Japanese..... | 1 |
| Russian..... | 7 | Finnish..... | 1 |
| Roumanian..... | 5 | Portuguese..... | 1 |
| Syrian..... | 4 | | |

"Four cases of measles and one of mumps developed among the contacts landed. Of the measles cases, three developed seven days and one twelve hours after admission. Two were disinfected and isolated on admission; the other two were not isolated, being an infant of tender years and its mother. The secondary case of mumps developed one day after landing and had been disinfected and isolated on admission.

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"Six deaths occurred at the hospital during the season, namely, one from pneumonia, one from scarlet fever; and four boys detained on account of mumps, momentarily escaped from hospital grounds and drowned themselves accidentally in the bay east of hospital. The scarlet fever and pneumonia patients died one and two days respectively after landing.

"The bodies of two members of crew who had died shortly before reaching the station of pneumonia, and pneumonia and shock following extensive scalds, respectively, were landed for burial in the Quarantine cemetery.

"Sixty-four chemical and bacteriological examinations were performed at the laboratory as follows:—

| | |
|----------------------------|----|
| Throat and nose swabs..... | 17 |
| Water..... | 26 |
| Blood..... | 10 |
| Urine..... | 8 |
| Sputum..... | 3 |
| Total..... | 64 |

"During the season 1,181 persons were vaccinated in accordance with the Quarantine Regulations, viz:—

| | |
|----------------------------------|-------|
| Passengers on board vessels..... | 755 |
| Passengers at station..... | 269 |
| Staff at station..... | 157 |
| Total..... | 1,181 |

"The quarantine boat *Polana* which was used as an inspecting boat at the station since June, 1911, was transferred to the Department of Marine and Fisheries, December 31, 1922, on account of the inspection of vessels being made henceforth at Father Point instead of Grosse Isle."

Lawlor's Island, Halifax, N.S.—Dr. Judson V. Graham, the Acting Quarantine Officer, reports as follows:—

"Inspection was made of 305 vessels, carrying 23,178 crew, 6,507 cabin passengers, 2,365 intermediate passengers, 13,987 steerage passengers, 30 stow-aways and 38 distressed seamen. These vessels reported 9 deaths and 1 birth at sea.

"The following quarantinable diseases were reported on ships arriving at this port: measles, 11; scarlet fever, 4; diphtheria, 5; mumps, 3.

"The following non-quarantinable diseases were reported: tonsilitis, 6; syphilis, 1; bronchitis, 10; diarrhoea (without fever), 6; malaria, 1; pneumonia, 1; biliary colic, 1.

"The following were taken to the quarantine hospital: measles, 8 cases, with two members of families accompanying; scarlet fever, 4, with two members of families accompanying; diphtheria, 3, with two members of families accompanying.

"No sickness developed among those accompanying the cases to the hospitals, neither were there any secondary cases of infection among the patients nor any deaths.

"Of the quarantinable diseases reported above, the following were destined to the United States: measles, 3; diphtheria, 2; mumps, 3. Isolation and care being satisfactory they were permitted to remain on board.

"On April 26, 1922, the ss. *Lituania* arrived at quarantine. During the inspection of the passengers a female third-class passenger bound for United States was found with a vesicular rash all over her body, very suggestive of early smallpox. Dr. Gouthro, Immigration Medical Officer of the department, and Dr. Jost, of the Nova Scotia Department of Public Health, saw the case in consultation and expressed the opinion that the rash was very suggestive of

smallpox. However, no positive diagnosis could be arrived at. The ship's owners held the ship in port until the following day, pending the permission of the United States Public Health Service for her to proceed to New York. On receipt of this permission the passengers destined to Halifax were disembarked into quarantine and the ship sailed for New York with the sick passenger on board, as allowed under Quarantine Regulations, paragraph No. 20.

"The passengers landed, to the number of 28, were detained at the Rockhead Hospital where they were all vaccinated (positive reaction in each case), bathed, and their clothing and effects disinfected. They were released May 2, following receipt of telegraphic advice from New York that the case was diagnosed definitely as not smallpox.

"During the past winter the ice conditions in the Halifax harbour have been unusually severe. The ss. *Minoca* succeeded in keeping the passage to Lawlor's Island open until February 5, when she lost all the blades of her propeller by striking floating ice with it. She was assisted back to her dock by the *C.G.S.S. Nelson* and a local tow-boat.

"Owing to the same ice conditions the *Minoca* was unable to get on the marine railway until February 23, and repairs were finally completed March 27. During the time the *Minoca* was out of commission any boat that was available was made use of in visiting vessels in quarantine.

"The Marine Department sent their ice-breaker at various times during the winter to open up the passage to Lawlor's Island, but the weather was so severe that the floating ice would freeze solid over-night. This ice was so heavy and the cakes so large that it was not safe for the *Minoca* to attempt to keep the passage open at night. In spite of the efforts of the Marine Department's ice-breaker and the *Minoca* the passage was not finally opened to remain open, until April 3.

"On account of the passage to Lawlor's Island being closed by ice, it was necessary to make use of Rockhead hospital on two occasions, passengers being admitted there from the ss. *Pittsburg*, February 24, and from the ss. *Andania*, March 13, in both cases affected with measles.

"The only passengers vaccinated at this station during the year were the 28 detained ex. the ss. *Lituania*.

"In February, 1923, all members of the staff and the families of those resident at the station not successfully vaccinated the preceding year, together with the new members of the staff, were revaccinated, all showing positive reactions."

Partridge Island, St. John, N.B.—Dr. R. T. Rutherford, the Quarantine Officer, in his report states as follows:—

"The Norwegian steamship *Tune* arrived from San Pedro de Macoria, Dutch West Indies, on June 2, 1922, at which time that port was reported to be suffering from an epidemic of smallpox. The crew numbering 23 were brought to the Quarantine Hospital and detained for observation and vaccination until such time as we had a positive vaccination or an immune reaction.

"On February 5, 1923, we admitted ex. ss. *Melita* four cases of scabies together with two contacts, there being at the time no available accommodation in the Immigration Hospital at St. John. On February 11, one of these developed measles, which must have been the result of exposure prior to landing and even perhaps prior to embarkation. On February 19, one of the contacts developed measles, and on February 24, one other of the scabies cases developed measles. The exposure leading to these cases of measles must have occurred several days before their arrival at this port.

"No deaths were reported during the year, and no cases of cross-infection.

William Head, Victoria, B.C.—Dr. C. P. Brown was appointed medical superintendent in June, 1922, following the retirement of Dr. Nelson. The

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detention buildings now have sleeping accommodation for 694 persons, and the hospital will at present accommodate about 17 patients. Minor infectious diseases arriving at quarantine are now by arrangement sent to the Provincial Royal Jubilee Hospital, Victoria.

An officer of the Customs Department has quarters at the station, and uses the launch *Evelyn* for patrol work as needed. Dr. Brown furnishes the following details regarding the case of smallpox landed during the year:—

"In June, 1922, the ss. *Empress of Canada* arrived at quarantine with one case of smallpox on board. Those of the saloon passengers who could show evidence of recent vaccination were allowed to proceed; others in this class were detained. Remainder of the crew and passengers without similar vaccination were vaccinated, after which they were allowed to proceed. The patient and immediate contact were placed in hospital. The ship's quarters were disinfected and the vessel released."

(2) IMMIGRATION MEDICAL SERVICE

Immigrant and non-immigrant passengers to the number of 66,480 were examined by officers of the Immigration Medical Service at the Atlantic and Pacific ports for the purpose of detecting physical or mental diseases or defects, in accordance with the provisions of the Immigration Act. This number compared with 63,990 for the previous year, shows an increase of 2,490.

Immigrant passengers who on arrival at Canadian ocean ports required medical or surgical treatment, were removed to hospital to the number of 152. These were subsequently released as cured or fit to travel, except where otherwise noted in the following tabulated statement:—

IMMIGRANTS DETAINED IN HOSPITAL FOR MEDICAL OR SURGICAL TREATMENT

| Diagnosis | Quebec | Halifax | St. John | Vancouver | Victoria |
|-----------------------------|--------|---------|----------|-----------|----------|
| Abdominal N.Y.D. | | | 1 | | |
| Abscess | 3 | | | | |
| Alcoholism | | | | 1* | |
| Anaemia | | | | 1 | |
| Appendicitis | | | 1 | | |
| Bronchitis | | 1 | | | |
| Childbirth | 2 | | | | |
| Conjunctivitis | 3 | 2 | 2 | 15 | 4 |
| Dental periosteitis | 1 | | | | |
| Dermatitis | 1 | | | | |
| Eczema | 1 | | | | |
| Furunculosis | 2 | | 1 | | |
| Epileptiform seizures | | | | 1 | |
| Gastro-intestinal infection | 1* | | | | |
| Herpes | | | | 1 | |
| Hookworm | | | | 1 | |
| Impetigo | 5 | 2 | 2 | | |
| Infected hip | 1 | | | | |
| Iritis | | | | 1 | |
| Menorrhagia | 1 | 1 | | | |
| Nephritis | | | | 1 | |
| Phlebitis | 1 | | | | |
| Pneumonia | | | 3 | 1* | |
| Post-dysentery | | | 1 | | |
| Pyrexia | | | 2 | 2 | |
| Scabies | 7 | | 1 | 2 | 66 |
| Sepsis | | | 2 | | |
| Syphilis | | 1 | | | |
| Tonsillitis | 2 | | | | |
| Toothache | 1 | | | | |
| Ulcer of leg | 1 | | | | |
| Vaccination infection | 1 | | | | |
| Totals | 34 | 7 | 16 | 25 | 70 |

* Died.

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Of the immigrant passengers detained at the immigration hospitals at the respective ports for a more detailed medical examination than could be afforded during line inspection, the diagnoses of the following were found to be negative and they were immediately released by the medical officers:—

IMMIGRANTS DETAINED FOR INTENSIVE MEDICAL EXAMINATION—SUBSEQUENTLY RELEASED AS "NEGATIVE."

| Detained for | Quebec | Halifax | St. John | Totals |
|----------------------------|--------|---------|----------|--------|
| General observation..... | 5 | 2 | 5 | 12 |
| Mental observation..... | 6 | 2 | 3 | 11 |
| Observation of eyes..... | 5 | | 2 | 7 |
| Observation of heart..... | | 1 | | 1 |
| Observation of nails..... | 10 | 1 | 6 | 17 |
| Observation of scalp..... | 10 | 3 | 2 | 15 |
| Observation of skin..... | 1 | | 2 | 3 |
| Observation of throat..... | 1 | | | 1 |
| Totals..... | 38 | 9 | 20 | 67 |

In addition to those "certified", immigrants to the number of 661 were found to have physical or mental defects of a minor character not serious enough to bring them within the "prohibited classes" set out in section 3 of the Immigration Act. These persons were released by the medical officers after a note of their condition had been entered on individual record cards and filed for possible future reference.

IMMIGRANTS NOTED AS HAVING MINOR MENTAL OR PHYSICAL DEFECTS

| | |
|---------------|-----|
| Quebec..... | 425 |
| Halifax..... | 159 |
| St. John..... | 77 |
| Total..... | 661 |

IMMIGRANTS "CERTIFIED" BY MEDICAL OFFICERS UNDER SECTION 3 OF THE IMMIGRATION ACT

SUBSECTIONS (a) AND (k)—MENTALLY DEFECTIVE

| Disability | Quebec | Halifax | St. John |
|--|--------|---------|----------|
| <i>Subsection (a)—</i> | | | |
| Epileptics..... | 2 | | 1 |
| Feeble-minded..... | 1 | 1 | 1 |
| Imbeciles..... | 2 | | |
| Insane..... | 3 | 2 | 1 |
| <i>Subsection (k)—</i> | | | |
| Constitutional psychopathic inferiority..... | 2 | 2 | 3 |
| Totals..... | 10 | 5 | 6 |

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SUBSECTION (b)—PERSONS AFFLICTED WITH LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | Montreal | Halifax | St. John | Vancouver | Victoria |
|------------------------|--------|----------|---------|----------|-----------|----------|
| Favus of nails..... | 6 | | | 4 | | |
| Gonorrhoea..... | 1 | | | | | |
| Psoriasis..... | 2 | | | 2 | | |
| Ringworm of scalp..... | 1 | | | | | |
| Ringworm of skin..... | | | | 2 | | |
| Sycosis barbae..... | | | 1 | | | |
| Trachoma..... | 3 | 1 | | 1 | 4 | 2 |
| Tuberculosis..... | 1 | | | | 1 | |
| Totals..... | 14 | 1 | 1 | 9 | 5 | 2 |

SUBSECTION (m)—PHYSICALLY DEFECTIVE—AFFECTING ABILITY TO EARN A LIVING

| Defects | Quebec | Halifax | St. John | Vancouver |
|------------------------------------|--------|---------|----------|-----------|
| Amputated members..... | 4 | 4 | 6 | |
| Club footed..... | 1 | | | |
| Congenital dislocation of hip..... | 1 | 1 | | |
| Curvature of spine..... | 3 | | | |
| Deafness, partial..... | 7 | | | 3 |
| Defective vision..... | | | | 2 |
| Deformed limbs..... | | | | |
| Diabetes..... | 1 | | | |
| Disordered heart action..... | | | 1 | |
| Exophthalmos..... | | | 1 | |
| General debility..... | 1 | | | |
| Gun shot wound skull..... | | | 1 | |
| Hernia..... | 9 | | | |
| Hydrocele..... | | 1 | | |
| Impaired function of member..... | 12 | 5 | 12 | |
| Impediment of speech..... | 4 | 2 | 4 | |
| Loss muscular tissue..... | | | 1 | 1 |
| Loss of eye..... | | | | |
| Paralysis leg..... | 1 | | | |
| Poor physique..... | | 1 | | |
| Scoliosis..... | | | 1 | |
| Torticollis..... | 1 | | | |
| Varicose veins..... | 1 | | 1 | |
| Totals..... | 53 | 14 | 33 | 1 |

SUBSECTION (c)—PERSONS PHYSICALLY DEFECTIVE—"LIABLE TO BECOME A PUBLIC CHARGE."

| Defects | Quebec | Halifax | St. John |
|-------------------------------------|--------|---------|----------|
| Absence of fingers, congenital..... | 1 | | |
| Absence of forearm, congenital..... | 1 | | |
| Amputated members..... | 31 | 2 | 4 |
| Anaemia..... | | | 1 |
| Arthritis, chronic..... | 3 | | |
| Asthma, chronic..... | | 1 | |
| Atrophy, muscular..... | | | 1 |
| Blindness, partial..... | 1 | 2 | |
| Blindness, total..... | 3 | 1 | |
| Bronchitis..... | 2 | | |
| Chest, defective..... | | | 1 |
| Chorea..... | | | 1 |
| Club footed..... | 1 | | |
| Curvature of spine..... | 13 | 2 | |
| Deafness, partial..... | 41 | 1 | 9 |
| Deafness, total..... | 15 | | 3 |
| Deaf and dumb..... | 2 | | |
| Debility, general..... | 7 | 3 | |
| Defective vision..... | 40 | 1 | 4 |
| Deformed hand..... | | 2 | |
| Dermatitis..... | | | 4 |
| Discharging sinus of hip..... | 1 | | |
| Dislocated hip..... | 4 | | 1 |
| Disordered heart action..... | 3 | | |
| Flat footed..... | | 1 | |
| Facial paralysis..... | | 1 | |
| Glands of neck..... | 3 | 1 | |
| Goitre, exophthalmic..... | 1 | 1 | |
| Goitre, simple..... | 1 | | |
| Gun-shot wounds..... | | 1 | 3 |
| Hernia..... | 21 | 4 | 5 |
| Impaired members..... | 67 | 2 | 22 |
| Impediment of speech..... | 2 | | |
| Kyphosis..... | | | 3 |
| Laryngitis, chronic..... | | | 1 |
| Malaria, recurring..... | 3 | | |
| Nephritis, chronic..... | 1 | | |
| Neurasthenia..... | 1 | | |
| Osteo-myelitis, chronic..... | 1 | | |
| Otitis Media..... | | 2 | |
| Paralysis agitans..... | | | 1 |
| Paralysis of leg..... | 1 | | 1 |
| Pleurisy, dry..... | | | |
| Poor physique..... | 1 | 6 | 2 |
| Presenility..... | 1 | | 2 |
| Psoriasis..... | 2 | | 2 |
| Rheumatism, chronic..... | 10 | | |
| Rickets..... | | 1 | 1 |
| Scoliosis..... | | | 1 |
| Senility..... | | 5 | 1 |
| Stone in ureter..... | 1 | | |
| Teno Synovitis, chronic..... | 1 | | |
| Valvular disease of heart..... | 7 | 1 | 7 |
| Varicose veins..... | 2 | | 2 |
| Totals..... | 296 | 40 | 81 |

The total number of persons "certified" as coming within the "prohibited classes" set out in section 3 of the Immigration Act, is as follows:—

| | |
|--|-----|
| Section 3, Subsection (a)—Mentally defective..... | 14 |
| Section 3, Subsection (b)—Tuberculosis or loathsome disease..... | 32 |
| Section 3, Subsection (c)—Physically defective..... | 417 |
| Section 3, Subsection (k)—Constitutional psychopathic inferiority..... | 7 |
| Section 3, Subsection (m)—Ability to earn living affected..... | 101 |

Total "certified"..... 571

Statements follow showing, by ports, the specific mental and physical diseases or defects for which these persons were "certified."

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IMMIGRANTS AND NON-IMMIGRANTS MEDICALLY INSPECTED AT OCEAN PORTS

| Month | Quebec | | Montreal | | Halifax | | St. John | | North Sydney | | Sydney | | Vancouver | | Victoria | | New York and Boston | | Totals |
|----------------|--------|----------|----------|----------|---------|----------|----------|----------|--------------|----------|--------|----------|-----------|----------|----------|----------|---------------------|----------|--------|
| | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | |
| 1922-23 | | | | | | | | | | | | | | | | | | | |
| April..... | 86 | 66 | ..... | ..... | 889 | 140 | 1,852 | 194 | 14 | 73 | 7 | 23 | 64 | 82 | 81 | 22 | 393 | 84 | 4,070 |
| May..... | 7,617 | 933 | 27 | 24 | 189 | 181 | 12 | 45 | 43 | 293 | ..... | 4 | 105 | 177 | 77 | 67 | 289 | 116 | 10,212 |
| June..... | 4,528 | 755 | 39 | 38 | 119 | 53 | 17 | 78 | 50 | 381 | ..... | ..... | 119 | 211 | 79 | 63 | 111 | 145 | 6,700 |
| July..... | 5,446 | 751 | 39 | 38 | 11 | 40 | 14 | 69 | 38 | 486 | ..... | ..... | 89 | 287 | 50 | 73 | 123 | 181 | 7,735 |
| August..... | 3,661 | 835 | 20 | 132 | 24 | 89 | 18 | 158 | 137 | 401 | ..... | 2 | 40 | 241 | 49 | 78 | 156 | 130 | 6,171 |
| September..... | 4,239 | 850 | 47 | 52 | 9 | 119 | 8 | 76 | 314 | 713 | ..... | 5 | 41 | 246 | 32 | 63 | 171 | 114 | 7,099 |
| October..... | 4,035 | 520 | 52 | 32 | 20 | 174 | 12 | 7 | 235 | 442 | ..... | 6 | 79 | 75 | 36 | 18 | 174 | 122 | 6,039 |
| November..... | 2,172 | 318 | 25 | 15 | 57 | 88 | 120 | 14 | 372 | 301 | 1 | 11 | 55 | 47 | 36 | 20 | 172 | 80 | 3,904 |
| December..... | ..... | ..... | 1 | ..... | 877 | 119 | 1,050 | 148 | 120 | 274 | ..... | ..... | 99 | 64 | 51 | 11 | 263 | 36 | 3,113 |
| January..... | ..... | ..... | 2 | ..... | 448 | 207 | 1,145 | 95 | 127 | 106 | ..... | ..... | 54 | 23 | 63 | 17 | 305 | 55 | 2,547 |
| February..... | ..... | ..... | ..... | ..... | 568 | 139 | 1,582 | 170 | ..... | ..... | 31 | 17 | 75 | 50 | 33 | 8 | 354 | 67 | 3,094 |
| March..... | ..... | ..... | ..... | ..... | 1,876 | 161 | 2,794 | 144 | ..... | ..... | 36 | 82 | 85 | 127 | 67 | 34 | 274 | 62 | 5,736 |
| | 31,784 | 5,028 | 252 | 315 | 5,087 | 1,510 | 8,624 | 1,198 | 1,450 | 3,472 | 69 | 150 | 906 | 1,630 | 654 | 471 | 2,085 | 1,192 | 66,480 |

Note—"Non-Immigrants" do not include returning Canadians.

LEPER STATIONS

Leper stations in Canada are two in number, one in Eastern Canada at Tracadie, N.B., of which Dr. J. A. Langis is the superintendent, and one on the Pacific coast, at D'Arcy Island, B.C., of which Dr. C. P. Brown, Quarantine Officer at William Head, is the superintendent.

Lazaretto, Tracadie, N.B.—At the close of the fiscal year, eleven patients were under treatment at this Lazaretto, six males and five females. One new case, a Chinese, was admitted on October 6, 1922, from a Montreal hospital. No deaths occurred during the year. The oldest patient is seventy-six, the youngest twenty-two years old. Seven are French Acadian, natives of Tracadie and of the surrounding country, one Prussian, one Iclander, one of French and Scotch descent, and one Chinese.

Dr. Langis reports as follows:—

"The three types of leprosy are seen here. We have seven arrested cases, three active but improving, and one in the last stage of the disease, with no hope of recovery.

"The treatment, the same as last reported, i.e., intramuscular injections of the ethyl esters of the fatty acids of chaulmoogra oil with iodide, H.I., is still giving good results. It is a cure for the malady.

"We owe a debt of gratitude to the Surgeon Director of the Leprosy Investigation Station, United States Public Health Service, Dr. H. W. Hasseltine, of Honolulu, Hawaii, for his kindness and generosity in periodically replenishing our supply of H.I.

"Sincere thanks are also due the nursing staff, the Reverend Sisters, who are the most potent help in the execution of my duties."

Lazaretto, D'Arcy Island, B.C.—This leper colony is situated about thirty miles from the Quarantine Station at William Head. Five Chinese lepers are at present under treatment, the number being unchanged from that of last year.

Dr. Brown reports as follows:—

"The lepers have been visited at weekly intervals by departmental medical officers. There has been slow but steady improvement in their condition. The United States Public Health Service has very kindly supplied us, through their officers at Honolulu with their preparation of the ethyl esters of the acids of Chaulmoogra oil, this without charge. Burroughs & Wellcome similar preparation "Moogrol" has also been used.

"Mr. and Mrs. McKee (the attendants at D'Arcy Island) are unremitting in their kindness and care over those in their charge."

In addition to the Chinese lepers under treatment at D'Arcy Island, a leper of Russian nationality is being cared for at the William Head Quarantine Station, where he was admitted some sixteen and a half months ago. Dr. Brown reports that this man's general health is good, and that the disease shows signs of responding favourably to the treatment being administered.

(3) MARINE HOSPITALS SERVICE

Under the provisions of Part V., Canada Shipping Act (Chapter 38, Sick and Distressed Mariners), sick mariners' dues of 2 cents per ton, net or registered tonnage, are levied on each vessel arriving at any port in the provinces of Quebec, New Brunswick, Nova Scotia, Prince Edward Island and British Columbia, from a foreign port or a port not within the same province. These dues are payable three times in each calendar year. Fishing vessels not registered in Canada pay no sick mariners' dues and do not participate in the bene-

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fits accruing therefrom; but fishing vessels of Canadian registry may pay these dues and participate in the benefits. This Act does not apply to the province of Ontario, and therefore, no dues are collected in that province.

All sick, injured and distressed mariners employed on ships on which this duty has been paid are eligible to free and gratuitous treatment, and the expenditure therefor is defrayed out of the appropriation voted by Parliament for that special purpose.

The Department of Health operated two Marine Hospitals, one at Sydney and the other at Lunenburg, N.S. At other ports sick sailors were treated at the various town and city hospitals as per list hereunder:—

Nova Scotia.—

Amherst—Highland View Hospital.
 Antigonish—St. Martha's Hospital.
 Bridgewater—Dawson Memorial Hospital.
 Glace Bay—St. Joseph's Hospital.
 Halifax—
 Victoria General Hospital.
 City Health Board (Contagious diseases).
 Tuberculosis Hospital.
 Kentville—Nova Scotia Sanatorium.
 Middleton—Soldiers' Memorial Hospital.
 New Glasgow—Aberdeen Hospital.
 North Sydney—Hamilton Memorial Hospital.
 Pictou—Pictou Cottage Hospital.
 Springhill—Springhill Cottage Hospital.
 Windsor—Payzant Memorial Hospital.
 Yarmouth—Yarmouth Hospital.

New Brunswick.—

Bathurst—James Dunn Hospital.
 Campbellton—Hotel-Dieu Hospital.
 Moncton—Moncton Hospital.
 River Glade—Jordan Memorial Sanatorium.
 St. John—
 General Public Hospital.
 County Hospital (T.B.C. cases).
 St. Stephen—Chipman Memorial Hospital.

Prince Edward Island.—

Charlottetown—
 Charlottetown Hospital.
 Prince Edward Island Hospital.
 Summerside—Prince County Hospital.

Quebec.—

Chicoutimi—Hotel-Dieu.
 Levis—Hotel-Dieu.
 Montreal—
 Montreal General Hospital.
 Notre-Dame Hospital.
 Hotel-Dieu.
 Royal Victoria Hospital.
 St. Paul's Hospital (Contagious diseases).
 Alexandra Hospital (Contagious diseases).
 Grace Dart Home (T.B.C. cases).

Quebec—Con.

Quebec—

Hotel-Dieu.

Jeffery Hale's Hospital.

Civic Hospital (Contagious diseases).

Sorel—Hospital General.

St. Johns—Hospital St. Jean.

Three Rivers—Hospital St. Joseph.

British Columbia—

Anyox—Anyox General Hospital.

Chemainus—Chemainus General Hospital.

Cumberland (and Union Bay)—Cumberland General Hospital.

Ladysmith—Ladysmith General Hospital.

Nanaimo—Nanaimo General Hospital.

New Westminster—St. Mary's Hospital.

Ocean Falls—Ocean Falls Hospital.

Port Alberni—West Coast General Hospital.

Power River—St. Luke's Hospital.

Prince Rupert—Prince Rupert General Hospital.

Vancouver—St. Paul's Hospital.

Victoria—St. Joseph's Hospital.

At ports where there are no marine nor designated hospitals, the collector of customs makes best provision for the treatment of sick mariners at private residences or public boarding-houses. In a few instances the Department has made arrangements in form of contract with private residences at yearly rental rates.

There has been a marked increase in the shipping activities, as instanced by the large increase in the payment of sick mariners' dues. At the port of Montreal there has been more than one thousand arrivals from foreign, which is an increase of more than one hundred over the preceding year. The same increased activities have been experienced in Vancouver and other ports. In fact the shipping has practically resumed pre-war conditions. This accounts for the large increase in the number of sick and distressed mariners as compared with previous years, and necessarily for the considerable increase in the expenditure for operating this Service.

The total number of sick and injured who were treated in this service was 2,663, as compared with 2,035 for the year 1922, or an increase of 628; the number of days of hospital and private boarding-house accommodation was 32,679 as compared with 26,341, being an increase of 6,338 days. In order to meet this increased expenditure it was necessary to apply to Parliament for a supplementary vote of \$20,000. This additional appropriation was nevertheless insufficient to cover the whole expenditure chargeable to the year 1922-23, and therefore amounts aggregating approximately \$5,000 will have to be defrayed out of the vote for 1923-24, this representing about 80 sick sailors and hospital treatment of about 1,300 days.

The schedule of fees for port physicians' services, mileage, etc., was completely revised and the hospital rates were adjusted to meet present conditions of living costs. The department was also successful in arranging with the sanatoria of the various provinces both on the Atlantic and Pacific coasts for the admission and treatment therein of mariners suffering from incipient tuberculosis. It is thought this latter move will be of great benefit to the sailors, amongst whom tuberculosis is so prevalent.

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I regret to report the loss through death during the year of the following medical officers:—

Dr. S. Anderson, Pictou, N.S.
 Dr. T. DesBrisay, Lunenburg, N.S.
 Dr. P. Duffy, Chatham, N.B.

Statements showing the various diseases and injuries for which the mariners received treatment during the year follow:—

STATEMENT OF DISEASES AND INJURIES TREATED

| | | |
|--|-----|-------|
| <i>General Diseases</i> — | | 545 |
| Measles..... | 9 | |
| Diphtheria..... | 5 | |
| Scarlatina..... | 4 | |
| Mumps..... | 1 | |
| Erysipelas..... | 2 | |
| Typhoid fever..... | 33 | |
| Para-typhoid..... | 5 | |
| Tuberculosis..... | 33 | |
| Malaria..... | 14 | |
| Scabies..... | 12 | |
| Syphilis..... | 71 | |
| Gonorrhoea..... | 108 | |
| Alcoholism..... | 1 | |
| Morphinism..... | 1 | |
| Diabetes..... | 5 | |
| Rheumatism..... | 68 | |
| Scurvy..... | 1 | |
| Anaemia..... | 2 | |
| New Growths malignant..... | 3 | |
| non-malignant..... | 6 | |
| Congenital malformation..... | 1 | |
| Cyst..... | 11 | |
| General Debility..... | 17 | |
| Neurasthenia..... | 12 | |
| Ptomaine..... | 1 | |
| Gangrene..... | 2 | |
| Influenza..... | 117 | |
| <i>Local Diseases</i> — | | 1,446 |
| Diseases of the Nervous System..... | 67 | |
| 1. Of the nerves..... | 17 | |
| Neuritis..... | | |
| 2. Of the Spinal cord and membranes..... | 2 | |
| Degeneration of lateral column..... | | |
| 3. Of brain and membranes..... | 3 | |
| Inflammation..... | | |
| 4. Functional and other nervous diseases, etc..... | 3 | |
| Epilepsy..... | 1 | |
| Paralysis..... | 2 | |
| Hemiplegia..... | 2 | |
| Apoplexy..... | 2 | |
| Congestion of brain..... | 2 | |
| Neuralgia..... | 26 | |
| Hemorrhage of brain..... | 1 | |
| Headache..... | 5 | |
| Hysteria..... | 2 | |
| Dementia praecox..... | 1 | |
| Diseases of the eye..... | 49 | |
| Conjunctivitis..... | 26 | |
| Chalazion..... | 1 | |
| Choroiditis..... | 1 | |
| Dacryocystitis..... | 5 | |
| Ulcer cornea..... | 4 | |
| Iritis..... | 6 | |
| Keratitis..... | 4 | |
| Blapharitis..... | 1 | |
| Pterygion..... | 1 | |
| Diseases of the ear..... | 44 | |
| Cerumen..... | 3 | |
| Otitis media..... | 35 | |
| Mastoiditis..... | 3 | |
| Deafness..... | 3 | |

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STATEMENT OF DISEASES AND INJURIES TREATED—*Continued*

| | |
|---|-----|
| Diseases of the nose..... | 9 |
| Rhinitis..... | 7 |
| Abscess..... | 1 |
| Epistaxis..... | 1 |
| Diseases of the Circulatory System..... | 24 |
| Heart Disease (valvular)..... | 13 |
| Tachycardia..... | 1 |
| Atheroma..... | 1 |
| Arterio-sclerosis..... | 3 |
| Thrombosis..... | 1 |
| Oedema..... | 1 |
| Myocarditis..... | 1 |
| Aneurism..... | 2 |
| Angina pectoris..... | 1 |
| Diseases of the Respiratory System..... | 247 |
| Bronchitis..... | 111 |
| Tonsilitis..... | 77 |
| Pneumonia..... | 11 |
| Bronchial-pneumonia..... | 2 |
| Laryngitis..... | 9 |
| Congestion of lungs..... | 4 |
| Pleurisy..... | 13 |
| Asthma..... | 50 |
| Oedema of lungs..... | 1 |
| Hemorrhage of lungs..... | 3 |
| Empyema..... | 3 |
| Abscess of lungs..... | 3 |
| Diseases of the Digestive System..... | 451 |
| Dental caries..... | 61 |
| Toothache..... | 10 |
| Alveolar abscess..... | 30 |
| Quinsy..... | 5 |
| Pharyngitis..... | 2 |
| Ulcer of stomach..... | 16 |
| Gastritis..... | 66 |
| Indigestion..... | 27 |
| Pyorrhoea..... | 7 |
| Cancer of the stomach..... | 3 |
| Fistula..... | 4 |
| Hemorrhoids..... | 27 |
| Appendicitis..... | 62 |
| Colitis..... | 14 |
| Jaundice..... | 4 |
| Diarrhoea..... | 16 |
| Constipation..... | 13 |
| Hepatitis..... | 7 |
| Hernia..... | 33 |
| Dysentery..... | 6 |
| Enteritis..... | 13 |
| Dyspepsia..... | 9 |
| Hepatic colic..... | 2 |
| Intestinal obstruction..... | 3 |
| Cholecystitis..... | 2 |
| Ulcer of duodenum..... | 4 |
| Hyperchloridia..... | 3 |
| Peritonitis..... | 2 |
| Diseases of the Lymphatic System..... | 37 |
| Adenitis..... | 37 |
| Diseases of the Urinary System..... | 47 |
| Nephritis..... | 12 |
| Bright's Disease..... | 3 |
| Renal colic..... | 1 |
| Peri-Nephritic abscess..... | 1 |
| Cystitis..... | 18 |
| Prostatitis..... | 4 |
| Retention..... | 1 |
| Renal calculus..... | 5 |
| Dysuria..... | 2 |

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STATEMENT OF DISEASES AND INJURIES TREATED—*Continued*

| | | |
|---|-----|-----|
| Diseases of the Generative System..... | 68 | |
| Urethritis..... | 4 | |
| Balanitis..... | 2 | |
| Stricture..... | 3 | |
| Phimosis..... | 5 | |
| Para-phimosis..... | 2 | |
| Chancroids..... | 5 | |
| Varicocele..... | 12 | |
| Hydrocele..... | 4 | |
| Orchitis..... | 17 | |
| Epididymitis..... | 14 | |
| Diseases of the Organs of Locomotion..... | | 95 |
| Osteitis..... | 2 | |
| Sciatica..... | 8 | |
| Myalgia..... | 18 | |
| Lumbago..... | 28 | |
| Osteo-myelitis..... | 1 | |
| Bursitis..... | 4 | |
| Sinusitis..... | 2 | |
| Perio-osteitis..... | 1 | |
| Caries..... | 3 | |
| Synovitis..... | 8 | |
| Arthritis..... | 17 | |
| Necrosis..... | 3 | |
| Diseases of the Connective Tissues..... | | 176 |
| Cellulitis..... | 117 | |
| Abscess..... | 59 | |
| Diseases of the Skin..... | | 132 |
| Carbuncle..... | 5 | |
| Boils..... | 56 | |
| Erythema..... | 4 | |
| Eczema..... | 12 | |
| Herpes..... | 3 | |
| Urticaria..... | 3 | |
| Dermatitis..... | 1 | |
| Ulcers..... | 28 | |
| Whitlow..... | 7 | |
| Impetigo..... | 2 | |
| Psoriasis..... | 4 | |
| Seborrhea..... | 1 | |
| Acnea..... | 1 | |
| Lichen..... | 1 | |
| Pemphigus..... | 1 | |
| Anthrax..... | 2 | |
| Tinea..... | 1 | |
| Injuries— | | |
| General Injuries..... | | 66 |
| Burns and scalds..... | 45 | |
| Multiple injuries..... | 21 | |
| Local Injuries..... | | 606 |
| Injuries face..... | 17 | |
| Contusions..... | 14 | |
| Injuries eyes..... | 18 | |
| Injuries head..... | 32 | |
| Fractured nose..... | 2 | |
| Fractured skull..... | 2 | |
| Foreign body eyes..... | 30 | |
| Injuries upper extremities..... | 156 | |
| Injuries chest..... | 11 | |
| Dislocation shoulder..... | 3 | |
| Fractured ribs..... | 23 | |
| Fracture maxillary..... | 1 | |
| Injury abdomen..... | 5 | |
| Dislocation hand..... | 1 | |
| Injuries side..... | 7 | |
| Sprained elbow..... | 2 | |
| Sprained back..... | 16 | |
| Fractured clavicle..... | 5 | |
| Fractured fingers..... | 18 | |
| Fractured arm..... | 22 | |
| Sprained wrist..... | 10 | |
| Dislocation elbow..... | 2 | |
| Fractured femur..... | 8 | |
| Fractured tibia and fibula..... | 4 | |

STATEMENT OF DISEASES AND INJURIES TREATED—*Concluded*Injuries—*Con.*

| | |
|---|-------|
| Fractured tibia..... | 11 |
| Fractured fibula..... | 2 |
| Fractured spine..... | 3 |
| Fractured patella..... | 5 |
| Fractured foot..... | 4 |
| Fractured toes..... | 4 |
| Injuries to lower extremities..... | 85 |
| Sprained knee..... | 6 |
| Sprained ankle..... | 16 |
| Fractured sacrum..... | 3 |
| Flat-foot..... | 2 |
| Frost-bite..... | 2 |
| Fatigue..... | 1 |
| Gunshot wound..... | 1 |
| Malingering..... | 3 |
| No diagnosis..... | 30 |
| Observation..... | 3 |
| Examination..... | 16 |
| Total number of seamen treated during the year, 1922-23.. | 2,663 |

| | |
|-----------------------|-------------|
| General diseases..... | 545 |
| Local diseases..... | 1,446 |
| General injuries..... | 66 |
| Local injuries..... | 606 |
| | <hr/> 2,663 |

(4) VENEREAL DISEASE CONTROL

The campaign against the venereal diseases in Canada, which is being carried on conjointly by the Dominion and Provincial Governments, has been in operation for a period of three years. This campaign may be divided roughly into five main divisions:

1. Treatment.
2. Education.
3. Social Service.
4. Law Enforcement.
5. Statistics.

TREATMENT

The object aimed at in the provision of free treatment is twofold, viz., cure of existing cases and prevention of the occurrence of new cases. As contagion is, in the vast majority of cases, direct; it is manifest that the greater the number of cases which are rendered non-infective, the fewer the number of new cases that will arise. Treatment is, therefore, not only beneficial to the individual but to the community at large.

Treatment, to be effective, must be provided for all classes of individuals. Our policy has been to offer the best means both of diagnosis and treatment available, free of charge, to every venereal patient. Free treatment for venereal disease has been provided for in clinics and institutions, such as jails and reformatories, and through local physicians for cases remote from clinics. Beds are provided for cases requiring hospitalization. In establishing the clinics the following points were aimed at:—

1. To treat, promptly and effectively, the individual suffering from venereal disease.

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2. To reach and render non-infective the greatest possible number.
3. To place the specialist in venereal disease diagnosis and treatment within the reach of every infected individual.
4. To make complete cure possible for everyone infected.
5. To diminish the spread of venereal disease in the community.
6. To act as educational centres for the prevention of illicit sexual intercourse and the prevention of venereal disease.

There are fifty-four clinics for the free treatment of venereal disease in the Dominion, extending from coast to coast and distributed as follows:—

| | |
|-----------------------|----|
| Nova Scotia..... | 5 |
| New Brunswick..... | 8 |
| Quebec..... | 10 |
| Ontario..... | 15 |
| Manitoba..... | 4 |
| Saskatchewan..... | 6 |
| Alberta..... | 4 |
| British Columbia..... | 2 |

These clinics were inspected by the chief of the division during the year.

The two points of importance that were considered in locating the clinic were accessibility and privacy. These two factors were met in some cases by placing the clinic in a hospital, as part of the general clinic, and in other cases by placing it in an office or other public building.

The advantages of making the venereal disease clinic part of the general clinic or operated in conjunction with other clinics are:—

1. It shows the public that venereal diseases are treated in exactly the same way as other diseases, which helps to develop a proper mental attitude on the part of the general public towards those diseases.

2. Specialists in the various branches of medicine are always at hand for consultation.

3. Clinics are operated more cheaply.

4. Students have greater opportunity for studying these diseases.

5. Many patients seek treatment in the general clinic who are unaware of the fact that they are suffering from venereal disease and are promptly referred to the venereal disease division; no time is, therefore, lost in bringing them under treatment.

6. The established institution with a reputation to maintain is apt to take greater pains with its patients.

Clinics are open, as a rule, in the afternoon. It is only with the greatest difficulty that physicians can be persuaded to give their services in the evenings and, without a doubt, the evening is the time best suited to the treatment of men. In most cases it is difficult or impossible for men to get away during the afternoon. Clinics should be open afternoons for women and children and evenings for men. Unfortunately, very few of our clinics are open evenings. All clinics are equipped with laboratory apparatus sufficient for dark field and smear examinations. Other examinations, bacteriological, serological and pathological are made in provincial laboratories which have been specially equipped for the work as part of the campaign. Examinations are made free of charge in these laboratories for all physicians. The personnel of the clinic consists in most cases of a physician, social service nurse and orderly.

We find that the success of the clinic depends in no little measure on the tactfulness and friendliness of the physician and nurse. There are, at present, being treated in our clinics, roughly, twelve thousand patients and new patients are coming in at the rate of about one thousand a month. The majority of

those attending our clinics are being treated for syphilis. Patients suffering from syphilis remain under treatment much longer than those suffering from gonorrhœa; hence the number of cases of syphilis under treatment at any given time will be much greater than the number of cases of gonorrhœa. The form of treatment and the preparations used are a matter of individual choice for the medical officer in charge of the clinic and no attempt whatsoever has been made to adopt any one particular line of treatment, for it is felt that with standardization the treatment of the patient as an individual will cease and the results will be harmful.

Treatment of prisoners in institutions, such as jails and reformatories, is carried on in all of the provinces with gratifying results. Treatment of the type of individuals who find their way to penal institutions is of the utmost importance, as it is just this class, which includes criminals, vagrants and prostitutes, who are active spreaders of infection. Hospitalization is provided in all of the provinces for cases needing indoor treatment. In some provinces hospitals are obliged by law to provide accommodation for these cases. There is, as we know, considerable objection on the part of hospital authorities to the admission of cases of venereal disease; but hospital authorities should recognize the fact that these diseases are worthy of the same consideration and treatment as other diseases.

EDUCATION

The object of education in this campaign is not so much the dissemination of knowledge of venereal disease as the development of standards of conduct and the formation of character.

A knowledge of venereal diseases alone will not prevent illicit sexual intercourse nor its consequences; there must be, in addition, sound ideals which act as a basis for the control of sexual appetite.

Our campaign of education comprises general information of the prevalence and danger of venereal disease and special information appertaining thereto for groups of individuals, such as parents, young men, young women, physicians, clergymen, nurses, employers of labour, etc.

Information is disseminated by means of publications, lectures, moving pictures and the attractoscope.

Publications.—Publications of the Dominion Department of Health include a brochure of general information for the practitioner, a manual of diagnosis and treatment of gonorrhœa and syphilis; a manual of laboratory diagnosis and of the Wassermann reaction; pamphlets for parents, young men and women; pamphlets for sailors, captains and ships' surgeons and for those suffering from gonorrhœa and syphilis, and a pamphlet for the prevention of gonorrhœal ophthalmia in children. Through the kindness of Dr. John H. Stokes, Chief of the Section of Dermatology and Syphilology of the Mayo Clinic, the privilege was obtained of distributing his valuable work, "To-day's World Problem in Disease Prevention," to the medical profession throughout Canada. I would like to add a word of thanks to Dr. Stokes for his generosity in again permitting us the use of his book, which is easily the most valuable of our educational literature. Abstracts of Current Venereal Disease Literature are distributed monthly to clinics and physicians who are interested in the subject. This is one of the most valuable of our publications and is distributed mostly to physicians. Testimonials from prominent physicians in Canada and the United States testify to its value.

Posters have been placed in public places calling attention to the dangers of venereal disease and advertising free treatment in clinics throughout the

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country. In addition, the provinces distribute venereal disease literature. There were distributed in 1922 the following pieces of literature, etc.:

| | |
|--|--------|
| Stokes' book, English..... | 6,000 |
| " " French..... | 2,500 |
| Prevention of Blindness in Babies, English..... | 46,000 |
| " " " French..... | 8,000 |
| V.D. Diagnosis and Treatment, English..... | 3,500 |
| " " " French..... | 500 |
| " Microscopic Examination, English..... | 3,500 |
| " " " French..... | 500 |
| " Wassermann Test, English..... | 3,000 |
| " " " French..... | 500 |
| " General Circular, English..... | 2,000 |
| " " " French..... | 500 |
| Information for Men, English..... | 15,000 |
| " Young Women, English..... | 9,000 |
| " Parents, English..... | 14,000 |
| " Men, French..... | 5,000 |
| " Young Women, French..... | 5,000 |
| " Parents, French..... | 5,000 |
| Abstracts of Current V.D. Literature, No. 1..... | 1,500 |
| " " " " No. 2..... | 1,500 |
| " " " " No. 3..... | 1,500 |
| " " " " No. 4..... | 1,500 |
| " " " " No. 5..... | 1,300 |
| " " " " No. 6..... | 1,100 |
| " " " " No. 7..... | 1,700 |
| " " " " No. 8..... | 1,800 |
| " " " " No. 9..... | 2,500 |
| " " " " No. 10..... | 2,500 |
| " " " " No. 11..... | 2,100 |
| " " " " No. 12..... | 2,000 |
| " " " " Special No..... | 9,000 |
| V.D. Educational Pamphlet No. 4, English..... | 6,000 |
| " " " No. 5..... | 6,000 |
| " " " No. 4, French..... | 5,000 |
| " " " No. 5..... | 5,000 |
| Pamphlet to the Sailor, English..... | 3,000 |
| " " " French..... | 500 |
| " " Captain, English..... | 300 |
| " " " French..... | 300 |

Lectures.—Physicians, laymen and women, through the Dominion and Provincial Departments of Health and the National Council for Combating Venereal Disease, are giving lectures to general audiences and special groups.

The Chief of the Division of Venereal Disease Control addressed numerous audiences in various parts of the Dominion. In the month of January he accompanied representatives of the Canadian Social Hygiene Council on a lecture tour throughout the Province of New Brunswick. Packed houses were addressed in twelve cities. In Moncton, Fredericton and St. John hundreds were unable to gain admission to the lecture theatres. The meeting at St. John, N.B., was the largest public meeting ever held in that city. It was stated that this was the greatest series of public health meetings ever held in the Dominion. These lectures will be repeated in other provinces.

The incidence of venereal disease is greatest between the ages of seventeen and twenty-five years. Our lecture, to be effective, must anticipate this life period. Very little is accomplished through lectures to men of twenty-five years and over, for their character and habits have long since been formed and nothing we can say or do will effect a change. Similarly, lectures to adult mixed audiences, whose interest in venereal disease is purely academic, do not do much to diminish the incidence of venereal disease. Our best work is done through lectures to young men between the ages of fourteen and nineteen. The young man is the chief offender and the chief victim, and we should concentrate our efforts on him.

Parents, mothers particularly, and educators fear that lectures on the subject of venereal disease to boys of fourteen may be productive of more harm

than good. In this respect we must not forget that, when judiciously discussing the subject of venereal disease with boys of fourteen, we are not opening up a new subject, and one with which they are entirely unfamiliar, but are merely clarifying and making useful a knowledge which the vast majority of boys already possess; for the majority of boys receive their first knowledge of sex between the ages of nine and eleven years. This knowledge, gained as it is in the streets, is decidedly harmful. We cannot anticipate this knowledge. We cannot lecture to boys of tender age on the subjects of illicit sexual intercourse and venereal disease, as the judgment at that age is not sufficiently ripe to grasp the significance of our remarks and draw the desired conclusions. We can, however, do a great deal to offset that knowledge by our lectures before habits which are the direct result of that knowledge are formed. Similarly with young girls, our lectures on the ideals of womanhood, motherhood, deportment, the dangers of looseness, etc., must be given at an early age to be effective. Every boy and girl of sixteen years of age should have definite knowledge of the baneful effects of illicit sexual intercourse. Without that knowledge boys and girls are not equipped to face the realities of life, and unless we have given them that knowledge, we have not done our duty by them. Up to the present we have reached only very few boys and girls of the desired age. In that respect, at least, our campaign has been a failure.

Of the question of sex education in schools, very little need be said; for nothing of this nature has as yet been attempted in our schools. This subject was thoroughly threshed out at the "All American Conference on Venereal Disease", and the conclusions adopted were:—

"That education in relation to sex is but a phase of character education as a whole and cannot be accomplished at any one time. It must be a progressive process of care, guidance, instruction and example. This fact, together with the intimate relationships of the members of the family, place upon the home the chief responsibility for sex education of children during the earlier years.

"In the case of older children and adolescents, the responsibility for training and guidance in relation to sex is shared by all educational agencies having to do with young people."

Whatever our methods of educating the public—pamphlets, lectures, films—all of them unquestionably have their appointed place, and all are of value. As time goes on it will be possible to place a more exact value on each type of educational propaganda and we will be able to use each with greater effect.

Education, next to the development of character in the home, is the chief factor in the work of venereal disease prevention. Wider publicity through the pulpit and greater co-operation generally on the part of clergymen, physicians and persons in an administrative, legislative and judicial capacity are greatly needed.

SOCIAL SERVICE

Nearly all of the clinics have a social service nurse. Her work is of value to the patient, the clinic and the community. By her kindly interest she helps the patient to continue treatment until cured and encourages attendance of other members of the family at the clinic for examination and treatment, if necessary. She helps the clinic by keeping records, by aiding in administration and developing the efficiency of the clinic. The community, she helps through her visits to the home and the information which she disseminates there. One of the most important phases of social service work is the control of the delinquent girl who finds her way to the clinic or is under treatment in an institution. The tactful

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and interested nurse can and does help this type of girl in many ways. She encourages her, stimulates a renewal of self-respect, finds employment for her, and by removal to a new environment gives her an opportunity for rehabilitation.

In rural communities the district nurse does very valuable social welfare work. She visits the homes, inspects the children in the schools and through her efforts numbers of cases of venereal disease are brought into the city clinics and hospitals which otherwise would not have been treated. The social record sheet, which is kept by the nurse, is of great value in doing follow-up work, tracing the original source of infection and contacts; in estimating the value of propaganda and social welfare work, and in opening up new avenues of investigation. Social service work has not been given the recognition which its importance in the campaign merits.

LAW ENFORCEMENT

On the 9th of December, in the year 1915, the West Australian Venereal Disease Act came into being. On October 31, 1917, New Zealand brought in a similar but more limited Act, and in the years 1918 and 1919 several provinces in Canada made legislation of a like nature.

The main features of the Acts are the same in all of the provinces. These features comprise compulsory modified notification, compulsory examination of suspects and compulsory treatment of infected individuals, regulations prohibiting the sale of drugs and appliances for the cure of venereal disease, except on physicians' prescriptions; exclusion of infected persons from trades, right of entry; detention, quarantine, etc., regulations prohibiting infection of others, etc.

It will be seen at a glance that every effort has been made to bring under control individuals who neglect treatment and are a menace to others. There are, in addition, laws for the suppression of prostitution which have been in existence for a number of years. Latterly the "age of consent" has been raised and attempts have been made to provide legislation penalizing unmarried couples who register at hotels as man and wife. The advisability of penalizing owners of motor vehicles who use or permit their motor vehicles to be used for immoral purposes is under consideration, for it is realized to-day that the motor is replacing the house of assignation to no little extent. The success of the laws depends in great measure on the energy with which they are enforced. Money and the proper machinery, which are so essential for their enforcement are, to a great extent, lacking.

The laws of compulsory examination of suspects and compulsory treatment of infected individuals who fail to continue treatment as directed, apply chiefly to criminals, prostitutes and vagrants. These classes are constant spreaders of infection. These two laws are of real value and it is to be regretted that they are not enforced more rigorously throughout the whole of the Dominion. In only one or two provinces are they effectively enforced.

An attempt has been made in the United States to deal with venereal infection, especially as it occurs in inmates of bawdy houses, by placarding the premises in the same manner that premises are placarded for scarlet fever, smallpox, and other dangerous communicable diseases. This has not been attempted in Canada. In this regard the following resolution adopted at the "All American Conference on Venereal Diseases" will prove of interest:—

"Whereas, since too little information is available for giving a satisfactory statement as to the results of placarding premises quarantined for syphilis and gonorrhœa; and,

"Whereas, because of the nature of the diseases, their prevalence, and the widespread ignorance of their true character;

"It is resolved that the placarding of premises for the purpose of control of patients will be more harmful at this stage to a developing sympathetic public opinion than the (problematical) control of such individuals will benefit the public welfare".

The Dominion statute prohibiting the sale of drugs and appliances for the treatment of venereal disease, except on a physician's prescription, is enforced. The Division of Proprietary or Patent Medicines of the Department of Health refuses to register any proprietary remedy for this purpose and inspectors remove from sale any found on the market. If we succeed in enforcing compulsory treatment of prostitutes and other individuals who, through carelessness and indifference, are spreading infection, we will have accomplished much. The law of compulsory treatment of infected individuals is of real value in limiting the spread of infection. It should be more rigorously enforced. More important than laws and their enforcement is the following up of cases and continuation of treatment as long as the physician says it is necessary. Our experience shows that persuasion is a more powerful weapon than compulsion.

STATISTICS

It is only when one begins to look for venereal disease statistics that one realizes how fragmentary and unsatisfactory they are. The findings of the Royal Commission on Venereal Disease, which were published in 1916, added nothing to our previous knowledge of the prevalence of venereal disease in civilian life. They merely confirmed estimates that had been made a quarter of a century before by venerologists of various countries. Statistics of value which they gave us of the prevalence of venereal disease in the army and navy, are inapplicable to civilian life.

Since the inauguration of the world-wide campaign against venereal disease, attempts have been made to obtain statistics of value and to accomplish this the law enforcing notification of venereal disease was enacted. After a period of three years it is found that we are no whit better off than before. The returns being made by physicians practising in Canada do not, in any measure, represent the true incidence of venereal disease. Syphilis is being reported, but gonorrhœa scarcely at all.

In the year 1922, there were admitted to venereal disease clinics throughout the Dominion 12,252 new cases of venereal disease, and during the same period there were reported by physicians 16,220 new cases; making a total of 28,472 new cases of venereal disease for the year. There was an increase in the number of cases under treatment in clinics and institutions during the year, as well as an increase in the number of cases reported by physicians. The following figures, which are practically classical in that they so closely conform to estimates, are given for the province of Quebec:—

"Among the statistics of cases reported, 80 per cent of the total were men and 20 per cent women. Most became infected between the ages of 21 and 25, diminishing off from that figure both ways. Of these cases, 64 per cent are unmarried, 32 per cent married, and 4 per cent widowed. Commercialized prostitution accounts for 34 per cent and clandestine, 36 per cent. Congenital cases are only one per cent. Disease contracted under the influence of alcohol amounts to 25 per cent of the whole."

There are no figures of any real value of the prevalence of syphilis in civilian life. Drawing conclusions from the draft figures in the American army, 5.6 per cent would be an outstanding figure for the ages 21 to 31. The

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Life Extension Institute found less than one per cent of syphilis in industry and about 3 per cent in a mixed population. The Mayo Clinic found 4.6 per cent of syphilis in mixed classes. The Royal Commission gave 10 per cent for the British Isles. Mortality reports of syphilis are just as difficult to obtain as are morbidity reports, owing to the fact that physicians, through kindly motives, do not give syphilis as the cause of death.

The sum of \$200,000 was once more voted by the Dominion Government for carrying on the work of Venereal Disease Control. This was allotted to the provinces, which are carrying on the work, in the following way:—

| | |
|-----------------------|-------------|
| New Brunswick..... | \$ 7,517 83 |
| Nova Scotia..... | 10,573 86 |
| Alberta..... | 11,979 62 |
| Manitoba..... | 12,611 20 |
| British Columbia..... | 14,628 19 |
| Saskatchewan..... | 15,361 63 |
| Quebec..... | 47,388 80 |
| Ontario..... | 57,473 68 |

Prince Edward Island has not as yet joined in with the other provinces in the work.

The public are beginning to realize the gravity of the venereal disease question and increasingly active co-operation is being afforded those who are engaged in the work of venereal disease prevention and control. The progress during the year has been satisfactory. It is felt that a more intensive educational campaign by all who are engaged in the work throughout the Dominion would prove beneficial.

VENEREAL DISEASE REPORT FOR CALENDAR YEAR 1922

| Month | Number of new cases reported by physicians | Number of new cases of Syphilis | Number of new cases of Gonorrhœa | Number of new cases of Chancroid | Total number of new cases of Syphilis, Gonorrhœa and Chancroid |
|----------------|--|---------------------------------|----------------------------------|----------------------------------|--|
| January..... | 1,267 | 535 | 737 | 30 | 1,302 |
| February..... | 1,068 | 447 | 485 | 23 | 955 |
| March..... | 1,493 | 450 | 531 | 40 | 1,021 |
| April..... | 1,421 | 406 | 450 | 13 | 869 |
| May..... | 1,481 | 447 | 523 | 27 | 997 |
| June..... | 1,141 | 358 | 648 | 26 | 1,032 |
| July..... | 1,186 | 605 | 369 | 31 | 1,005 |
| August..... | 1,679 | 342 | 574 | 25 | 941 |
| September..... | 1,237 | 390 | 539 | 30 | 959 |
| October..... | 1,573 | 465 | 757 | 35 | 1,257 |
| November..... | 1,489 | 328 | 576 | 9 | 913 |
| December..... | 1,185 | 398 | 491 | 112 | 1,001 |
| | 16,220 | 5,171 | 6,680 | 401 | 12,252 |

Total number of new cases for the year, 28,472.

TOTALS FOR THE YEAR 1922

| Month | Number of patients under treatment | Number of treatments | Number of Wassermanns | Number of injections of Arspenamine | Number of laboratory examinations |
|----------------|------------------------------------|----------------------|-----------------------|-------------------------------------|-----------------------------------|
| January..... | 10,962 | 21,577 | 2,448 | 4,164 | 7,684 |
| February..... | 10,324 | 20,595 | 1,707 | 3,164 | 5,916 |
| March..... | 11,737 | 28,009 | 1,826 | 3,684 | 6,345 |
| April..... | 10,632 | 14,704 | 1,899 | 3,380 | 6,200 |
| May..... | 12,180 | 23,115 | 2,151 | 3,529 | 6,690 |
| June..... | 11,726 | 20,711 | 1,905 | 3,196 | 6,293 |
| July..... | 9,828 | 20,243 | 1,488 | 3,442 | 5,937 |
| August..... | 12,064 | 20,862 | 1,768 | 3,641 | 6,480 |
| September..... | 10,650 | 20,181 | 1,878 | 3,087 | 6,233 |
| October..... | 11,575 | 19,702 | 2,036 | 3,666 | 6,942 |
| November..... | 10,531 | 19,598 | 1,892 | 3,499 | 6,572 |
| December..... | 11,059 | 24,136 | 1,626 | 3,499 | 6,287 |
| Total..... | | 280,433 | 22,624 | 41,951 | 77,579 |

(5) DIVISION OF HOUSING, WITH HOSPITALIZATION AND SANITATION

HOUSING

A revote of \$9,550,080 was approved by Parliament for fiscal year 1922-23. Out of this amount a sum of \$3,225,286.16 was loaned by the Federal Government to the different provinces entitled to such loans under the provisions of the Federal Housing Act.

The unexpended amount of revote of 1922-23 as of date March 31, 1923, was \$6,324,793.84.

The total amounts loaned to the provinces since the enactment of the Order in Council, P.C. 2997, dated December 3, 1918, as of date March 31, 1923, were:—

| | |
|---------------------------|------------------------|
| Manitoba..... | \$ 1,975,000 00 |
| New Brunswick..... | 1,525,000 00 |
| Ontario..... | 9,350,000 00 |
| British Columbia..... | 1,701,500 00 |
| Quebec..... | 4,194,906 16 |
| Nova Scotia..... | 1,537,000 00 |
| Prince Edward Island..... | 50,000 00 |
| | <u>\$20,333,406 16</u> |

The total number of houses erected, 4,612.

The number of houses under construction and planned to be built, 223.

The number of municipalities operating, 160.

Provincial Housing Acts and schemes have been enacted by all of the Provincial Governments with the exception of Alberta. The provinces of Manitoba, New Brunswick and British Columbia participated to their full quota and the provinces of Ontario, Quebec, Nova Scotia and Prince Edward Island, availed themselves in part of the additional amount payable under the revote of fiscal year 1922-23.

The correspondence and inquiries received, although not so voluminous as in previous years, was self evident that there still existed a desire on the part

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of the people in the different provinces to improve their individual housing conditions, doubtless actuated by the example which had been set by the action taken under the provisions of the housing schemes.

One phase of the housing problem has particularly been impressed upon the Department by the advice sought by manufacturers when considering new locations for their industries and as more particularly noted by the efforts put forth in the devastated region of Haileybury caused by the disastrous fire in 1922.

At the request of the Premier of Prince Edward Island the department was asked to advise upon the proposed housing scheme, in consequence of which a visit was made whereat the provisions of the scheme were discussed and formulated for presentation to the Cabinet for approval.

The scheme was approved by Order in Council, P.C. 1688, under date August 14, 1922.

It will be noted that although legislation was enacted as of date August 14, 1922, the province did not participate in the federal loan until the end of March, 1923, and therefore no actual building took place.

Throughout the Dominion there would appear to be greater activity in homebuilding by the people, which can be taken as evidence of the success of the initiative taken in the enactment of legislation dealing with the housing problem of the post-war period.

HOUSING—STATEMENT SHOWING USE OF FEDERAL LOAN IN THE PROVINCES

(Compiled from Official Reports as of date March 31, 1923)

Dr. J. A. Amyot, C.M.G., Deputy Minister.

B. EVAN PARRY, M.R.A.I.C., Supervising Architect.

| Province | Amount payable on basis of 1911 census of \$25,000,000 basis | Additional Amount payable on basis of \$31,250,000, including revote of \$9,550,080, 1922-23 | Amount actually borrowed from Federal Government | Amount advanced by Province | Number of houses built | Number of municipalities | Number of houses under construction or to be built |
|----------------------------|--|--|--|-----------------------------|--|--------------------------|--|
| Manitoba..... | \$ 1,580,534 79 | \$ 395,133 69 | \$ 1,975,000 00 | \$ 1,097,841 09 | 314 | 17 | 33 |
| New Brunswick..... | 1,220,710 53 | 305,177 63 | 1,525,000 00 | | Figures not available from Provincial Government | | |
| Ontario..... | 8,753,291 93 | 2,188,322 98 | 9,350,000 00 | 8,283,040 99 | 2,316 | 74 | 100 |
| British Columbia..... | 1,361,521 59 | 340,380 40 | 1,701,500 00 | 1,701,500 00 | 528 | 30 | 45 |
| Quebec..... | 6,949,255 01 | 1,737,313 75 | 4,194,906 16 | 3,007,720 16 | 1,099 | 28 | |
| Nova Scotia..... | 1,707,931 14 | 426,982 79 | 1,537,000 00 | 1,537,460 00 | 355 | 11 | 45 |
| Saskatchewan..... | 1,708,257 23 | 427,064 31 | | | No action taken. | | |
| Prince Edward Island..... | 325,144 45 | 81,286 11 | 50,000 00 | | Loan made end of March, 1923, therefore no activities to report. | | |
| Alberta..... | 1,299,714 03 | 324,928 51 | | | No legislation enacted. | | |
| Northwest Territories..... | 64,110 99 | 16,027 75 | | | " | | |
| Yukon..... | 29,528 31 | 7,382 08 | | | " | | |
| Total..... | 25,000,000 00 | 6,250,000 00 | 20,333,406 16 | | 4,612* | 160* | 223* |

* Not including New Brunswick.

HOSPITALIZATION

From time to time trustees and hospital boards in different parts of the Dominion have applied to the Department for advice upon the planning, equipment, and principles pertaining to small community hospitals as also those for the treatment of infectious diseases.

Intensive studies have been made upon these subjects and a correlation of practices which obtain in the Dominion and other countries has been formulated. Further, sketch outline plans have been prepared for advice and guidance covering such hospitalization.

A brochure has been written upon the subject and is now being amplified in detail covering the more important phases such as equipment, lighting, heating, sanitation, food services, operating suites, etc., and will be published by the Department in due course. These inquiries have emanated from both the western and eastern provinces and the information furnished, it is understood, has been of great value.

The subject of hospitalization incidental to the Federal Quarantine Service has received the close attention of this division as far as relates to the remodeling of the buildings for the treatment of patients and housing of detained passengers, the results of which have proved the urge which obtained for such action as evidenced by the increased efficiency.

The new disinfector, power and plant house erected at Partridge Island, St. John, N.B., embodies the latest principles of disinfection and disinfestation and was finally completed ready for service in June, 1922.

The station at Lawlor's Island, Halifax, N.S., has been considerably improved both in wharfage and rearrangement of power, disinfection and disinfestation plant, as also the water system and fire protection. Obsolete isolated major infectious diseases hospitals have been remodelled so as to form a model smallpox unit, thereby decreasing the volume of labour and personnel incidental to such hospitalization. Medical officers' quarters which were non-existent prior to 1920 have been arranged, thereby providing means for close and intensive work in the case of quarantine. A survey was made of Rockhead Hospital, Halifax, N.S., with a view of ultimately treating the minor infectious diseases cases at this hospital.

In view of the proposal to treat the minor infectious diseases cases at the port of Quebec in the near future in lieu of as formerly at the Quarantine Station, Grosse Isle, P.Q., consideration was given to a scheme whereby such accommodation could be provided by revising and remodelling the existing hospital at Savard Park, P.Q., co-ordination of the services and economy being the essence of the scheme.

The preparation of a report upon the proposed new location at Bentinck Island, B.C., of the Lazaretto which now obtains at D'Arcy Island, B.C., occupied the attention of the division. Topography, climatic conditions, hydrography, water supplies, sanitation, lighting and communications were dealt with, culminating in the presentation of a complete scheme for the project.

Occasion was taken to report and advise on proposed accommodation for examination of hookworm disease in the Immigration building at Victoria, B.C.

SANITATION

Many applications have been and are being received daily asking for advice on sewage treatment for isolated houses where municipal sewage system is not available. It was, therefore, deemed advisable, owing to the importance of the subject, to have such a treatise prepared more particularly for the farmer, small

homesteader and trustees of small public institutions in isolated areas. The members of the Dominion Council of Health agreed that such a publication would prove of inestimable value and, consequently, it was published during the month of May, 1923, for distribution throughout the Dominion.

The Canadian National Parks Branch sought advice from the Department upon unsatisfactory sanitary conditions, including both sewage disposal and water supplies, which obtained at one of their townsites in Alberta. Careful investigation was made of the local conditions and a scheme devised whereby the existing outside privies should be abolished and tanks installed within the houses, the excreta being chemically treated and emptied by force pumps and disposed of in accordance with the most modern and scientific practice. Further, the wells found to be existing within the houses were recommended to be closed and driven wells installed in lieu thereof.

Water supplies have also received attention primarily from the point of view of obtaining pure supplies, special references being made to location, topography and soils, also the construction of wells, use of rain water and the objection to the primitive method of obtaining water outside the house when it is quite possible under present day conditions to have it installed within the house and of ready access to the housewife, thereby saving needless toil and lessening the causative effects of ill health.

Brochures covering the subjects of ventilation, garbage disposal and mosquito control are now under consideration and will be published in due course.

(6) OPIUM AND NARCOTIC DRUGS

The following licenses were issued during the year:—

| | |
|--|-----|
| Import licenses..... | 200 |
| Export licenses..... | 40 |
| Wholesale druggists' licenses..... | 110 |
| Retail druggists' licenses to manufacture..... | 56 |

The following table shows the amount of narcotics imported into Canada for the years 1919 to 1923 inclusive:—

| | 1919 | 1920 | 1921 | 1922 | 1923 |
|------------------|-------------|-------------|-------------|------------|-------------|
| Cocaine..... | 12,333 ozs. | 6,968 ozs. | 3,310 ozs. | 2,952 ozs. | 3,330 ozs. |
| *Morphine..... | 30,087 ozs. | 28,198 ozs. | 12,124 ozs. | 8,774 ozs. | 10,998 ozs. |
| Crude opium..... | 34,262 lbs. | 13,626 lbs. | 2,953 lbs. | 1,700 lbs. | 1,373 lbs. |

NOTE.—These figures cover the fiscal years ended March 31.

* Morphine includes diacetyl morphine (heroin).

While the above figures represent a slight increase in the amount of cocaine and morphine imported during the year ended March 31, 1923, it does not follow that there was an increase in the consumption of these drugs during the period in question, but simply that there was an increase in the quantity of these drugs held in stock at the end of the year.

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The following table shows the amount of narcotics exported from Canada during the year:

| Drug | Destination | Quantity | | |
|---|----------------------------|----------|------|------------|
| | | lbs. | ozs. | grs. |
| Cocaine..... | Newfoundland..... | .. | .. | 6,369 |
| | Brazil..... | .. | .. | 960 |
| | Nassau, B. P. Bahamas..... | .. | .. | 480 |
| Morphine..... | Newfoundland..... | .. | .. | 10,406½ |
| | Brazil..... | .. | .. | 1,920 |
| Heroin..... (diacetylmorphine) | Newfoundland..... | .. | .. | 16½ |
| | Brazil..... | .. | .. | 240 |
| Codeine..... | Newfoundland..... | .. | .. | 1,260 |
| | Brazil..... | .. | .. | 3,840 |
| | Nassau, B. P..... | .. | .. | 960 |
| Gum opium..... | Brazil..... | 2 | 8 | |
| | Nassau, B. P..... | .. | 8 | |
| Powdered opium..... | Brazil..... | 1 | 4 | |
| Tincture opium..... | Jamaica, B.W.I..... | 100 | .. | |
| Tincture of chloroform Co and morphine Co.. | Newfoundland..... | 2 | .. | |
| | Nassau, B. P..... | 5 | .. | |
| Dovers powders..... | Newfoundland..... | .. | .. | 1,000 tbs. |
| | Nassau, B. P..... | 1 | .. | |
| Glycoheroin..... | Newfoundland..... | 1 | gal. | |

In connection with the exports of narcotics from Canada, it might be explained that most of these drugs are included in a mixture with other ingredients such as in tablet or pill form, etc., or in the form of tinctures, and are generally included with a general order for drugs of various kinds required by customers of Canadian manufacturers in Newfoundland, New Zealand, British West Indies and Australia. Narcotics exported to England would represent goods returned by the Canadian importer to the manufacturer in England.

The export of narcotics is controlled under license, and such license is only granted conditional on the Canadian exporter obtaining from his customer in the country to which the goods are to be exported, written permission from the proper authority of the Government of the importing country with a certificate stating that the drugs are required solely for scientific or medicinal purposes. This permit must accompany all applications for licenses to export narcotic drugs. The object of this system, is for the purpose of confining the use of these drugs to legitimate purposes so far as is possible, and to prevent unscrupulous individuals from importing narcotics for illigitimate use.

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The following table shows the number of prosecutions handled by the Royal Canadian Mounted Police on behalf of the Department of Health during the fiscal year:

| Province | Doctors | Druggists | Veterinary Surgeons | Illicit dealers other than Chinamen | Chinamen |
|--|---------|-----------|---------------------|-------------------------------------|----------|
| British Columbia, not including Vancouver..... | | | | 9 | 164 |
| Vancouver..... | | | | 10 | 26 |
| Alberta..... | 2 | | | 6 | 26 |
| Saskatchewan..... | | | | 2 | 14 |
| Manitoba..... | | 2 | | 18 | 6 |
| Ontario, not including Toronto..... | | | 1 | 10 | 58 |
| Toronto..... | | | | 12 | 45 |
| Quebec, not including Montreal..... | | 1 | | 22 | 8 |
| Montreal..... | 12 | 7 | | 74 | 131 |
| New Brunswick..... | 1 | | | 3 | |
| Nova Scotia..... | | | | | 21 |
| Prince Edward Island..... | | | | | |
| Totals..... | 15 | 11 | 1 | 166 | 499 |
| Total convictions.....692 | | | | | |

Statistics covering the number of convictions for infractions of the Opium and Narcotic Drug Act other than by the federal police, are not yet available for the fiscal year. The attached table, however, shows the total number of convictions for offences against the Act for the judicial year ended September 30, 1922. These figures include federal, provincial and municipal prosecutions.

DETAILS OF CONVICTIONS FOR OFFENCES AGAINST THE OPIUM AND NARCOTIC DRUG ACT, FOR THE YEAR ENDED SEPTEMBER 30, 1922

Furnished by Dominion Bureau of Statistics

| Province | Breach of Opium and Narcotic Drug Act not other- wise spec'd. | In possession of | | | | | Smoking Opium | Selling Narcotic Drugs | Dispensing Narcotic Drugs | Keeping Opium Dens | Frequenting Opium Dens |
|---------------------------|--|------------------|---------|----------|---------------------------|--|------------------|------------------------------|---------------------------------|--------------------------|------------------------------|
| | | | | | Drugs not specified | | | | | | |
| | | Opium | Cocaine | Morphine | | | | | | | |
| Prince Edward Island..... | 11 | | | | | | 1 | | | | |
| Nova Scotia..... | 3 | 2 | | | 398 | | 2 | | | 1 | 3 |
| New Brunswick..... | 68 | 12 | 11 | | 114 | | 32 | | | 2 | 39 |
| Quebec..... | 25 | 70 | | 7 | | | 23 | | | 8 | 86 |
| Ontario..... | | 7 | | 11 | | | | | | | |
| Manitoba..... | | 7 | 5 | | | | | | | | |
| Saskatchewan..... | | 27 | 9 | 3 | 5 | | 8 | | | 3 | 3 |
| Alberta..... | 7 | 27 | 8 | 1 | 8 | | 5 | | | 2 | 2 |
| British Columbia..... | 14 | 127 | 52 | 44 | 140 | | 44 | | | 17 | 185 |
| Yukon Territory..... | | | | | | | | | | | |
| Totals for Canada..... | 138 | 272 | 93 | 66 | 665 | | 113 | | 2 | 31 | 318 |

DETAILS OF CONVICTIONS FOR OFFENCES AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE YEAR ENDED
SEPTEMBER 30, 1922—*Concluded*

Furnished by Dominion Bureau of Statistics

| Province | Total Convictions | | Sentence | | Racial Origin | | | | | | | | | | | | |
|---------------------------|-------------------|--------|------------------|--------------------------|----------------|------------------|---------|--------|---------|--------|--------|--------|---------|--------------|--------|----------|----------|
| | Male | Female | Option of a fine | Committed without option | Deferred, etc. | British American | Chinese | French | Italian | German | Jewish | Polish | Russian | Scandinavian | Indian | Japanese | Austrian |
| Prince Edward Island..... | 12 | | 12 | | | 2 | 10 | | | | | | | | | | |
| Nova Scotia..... | 11 | | 11 | | | 4 | 6 | 1 | | | | | | | | | |
| New Brunswick..... | 531 | 43 | 372 | 194 | 8 | 298 | 230 | 32 | 8 | 1 | | 4 | 2 | | | | |
| Quebec..... | 383 | 14 | 307 | 71 | 19 | 135 | 247 | 7 | 6 | | | | | | | | |
| Ontario..... | 21 | 2 | 11 | 11 | 1 | 17 | 6 | | | | | | | | | | |
| Manitoba..... | 65 | 4 | 47 | 19 | 3 | 15 | 50 | | | | | | 2 | 1 | | | |
| Saskatchewan..... | 65 | 2 | 48 | 18 | 1 | 16 | 49 | | | | 1 | | 1 | | 1 | 4 | |
| Alberta..... | 675 | 30 | 506 | 180 | 19 | 176 | 519 | | 1 | | | | | 1 | 1 | 3 | 1 |
| British Columbia..... | | | | | | | | | | | | | | | | | |
| Yukon Territory..... | | | | | | | | | | | | | | | | | |
| Totals for Canada..... | 1,763 | 95 | 1,314 | 493 | 51 | 663 | 1,117 | 40 | 15 | 1 | 2 | 4 | 5 | 2 | 5 | 3 | 1 |

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With regard to the situation in Canada, generally speaking, it is not much improved. Our laws are being strictly enforced and the importation, manufacture and sale of these drugs through the legitimate trade channels is under very strict supervision and control. Large quantities are smuggled into the country for illicit purposes and this to a very large extent adds difficulties to our efforts to suppress the illicit traffic in narcotics.

From information reaching the department there is very little doubt that the greater part of these illicit shipments is smuggled into this country by certain officers and members of the crews of the various steamship companies operating between Canadian and European ports. Drugs are smuggled into Canada from Italy, Switzerland, France, Holland, Germany and Great Britain. It is understood that sometimes these drugs pass through seven or eight hands between the time they are packed for shipment in Europe and their reaching the receiver in Canada.

This system is carried on very extensively and some of the dealers in the United States and Canada have four or five separate connections in Europe. The Department has reason to believe that large quantities of the drugs reaching Canada through illicit channels are intended for the United States, as the demand there is much greater than in Canada.

At the present time arrangements are being perfected by the Customs and Federal Police authorities in co-operation with the League of Nations, by which it is hoped to get at the root of this evil by apprehending the ringleaders interested in the smuggling of these drugs into the Dominion.

The medical profession is being convinced that it can do with much less of these drugs in the practice of medicine than has been customary in the past and that narcotics can be prescribed, in a great many instances, in some form other than morphine or heroin.

While Turkey and Persia remain outside the Opium Convention, it is extremely difficult to control the production of the basic drug, opium. Conditions in China also aggravate the situation to a very great extent, in view of the fact that in the northern provinces of China, the poppy is grown almost as extensively to-day as at any time in the past, and there is little doubt that large quantities of the opium produced in China (in contravention of the laws of that country) find a ready market through illicit channels.

The following is a list of narcotic drugs and opium-smoking paraphernalia seized by the Customs and Police authorities during the year ended December 31, 1922:—

| Place | Date | Nationality | Goods |
|---------------|--------------------|--------------|--|
| Montreal..... | Mar. 2, 1922..... | Canadian... | 4 ozs. cocaine |
| "..... | Jan. 5, 1922..... | Italian..... | 5½ ozs. cocaine |
| | | | 36 ozs. morphine |
| | | | 7 ozs. cocaine |
| | | | 1,000 heroin tabs. |
| "..... | Oct. 31, 1921..... | Unknown... | 36½ ozs. cocaine |
| "..... | July 31, 1922..... | Canadian... | 8½ ozs. cocaine |
| Victoria..... | " 31, 1922..... | Chinaman... | 28 tins opium |
| Montreal..... | Aug. 21, 1922..... | Canadian... | 4 lbs. opium |
| "..... | " 21, 1922..... | American... | 10 lbs. opium |
| "..... | " 21, 1922..... | Chinaman... | 15 lbs. opium |
| "..... | " 21, 1922..... | "..... | 25 lbs. opium |
| "..... | July 7, 1922..... | Unknown... | 4½ ozs. cocaine |
| Edmonton..... | June 30, 1922..... | American... | 5 capsules morphine |
| Victoria..... | Dec. 1, 1922..... | Chinaman... | 192 tins opium |
| Montreal..... | Nov. 20, 1922..... | Unknown... | 10,000 ozs. cocaine, morphine and heroin |
| St. John..... | Dec. 11, 1922..... | Canadian... | 100 ozs. morphine |

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| | |
|--|-------------------------|
| Opium..... | 199 lbs. 1 oz. 206 grs. |
| **"Decks" of opium..... | 489 |
| Opium seconds (Yenshee)..... | 9 lbs. 8 ozs. |
| MORPHINE..... | 7 lbs. 6½ ozs. 389 grs. |
| Tablets (half grain)..... | 1,285 |
| **"Decks" of morphine..... | 174 |
| COCAINE..... | 7 lbs. 1 oz. 163 grs. |
| **"Decks" of cocaine..... | 355 |
| HEROIN..... | 7 lbs. 5 ozs. 135 grs. |
| **"Decks" of heroin..... | 15 |
| DRUGS (Miscellaneous) including morphine, heroin and cocaine, 57 bottles containing 15 lbs. 3 ozs. | 58 grs. |
| **"Decks"..... | 3,134 |
| Opium lamps..... | 587 |
| Opium smoking pipes..... | 398 |
| Opium scales..... | 165 |

*A "Deck" is a small package containing from three to five grains.

Twenty-seven persons were deported by the Immigration authorities under the provisions of section 10 (b) of the Opium and Narcotic Drug Act.

One of the great needs in Canada at the present time is hospital accommodation for the treatment of drug addicts. The ordinary hospital does not care to admit this class of patient, owing to the fact that they are as a rule very noisy and require male attendants, and also in view of the fact that the treatment takes time and is therefore expensive, and the great majority of these drug addicts have not the financial means of paying for such treatment.

It is an agreed principle by most medical men who have made a study of the treatment of drug addicts, that it is practically impossible to treat this class of patient successfully, with a view to affecting a cure, unless the patient is confined to some hospital or institution where there are proper facilities for care whilst undergoing treatment. The so-called ambulatory method or gradual reduction treatment has long since proved a failure and has been discarded by the great majority of the medical profession as an unscientific and impractical method of effecting a cure, for the principal reason that drug habitués as a rule, while expressing a sincere desire to be freed from the habit, invariably manage to obtain supplies through the medium of more than one physician at the same time, or through underground channels, thereby nullifying the efforts of the actual physician directing the treatment. It is therefore of the first importance that a patient should be confined to an institution, so that his physician may have absolute control over the supply of narcotics obtained by the patient while undergoing treatment.

Unfortunately, at the present time there are no institutions in any of the provinces, which make provision for the admission of drug addicts to be treated voluntarily or otherwise. Most of these patients are committed to the ordinary jail or to an insane asylum, neither of which can be considered a proper place for the treatment of this class of patient. The matter of treatment is purely a medical one, while the suppression of the illicit traffic is altogether a police question. The two, however, are inseparably linked up in so far as stamping out the evil is concerned, and until such time as the provincial and municipal authorities make arrangements for the care and treatment of drug addicts, it will be a most difficult matter to eradicate the evil and prevent its spread. It has been proved that drug addicts succeed in inducing persons to use deleterious drugs, thereby spreading the habit with a view to being themselves able to obtain a supply of the drugs when in need. The drug addict lives in fear of not being able to replenish his supply.

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In the clinic which was opened in the city of New York some few years ago for the treatment of drug addicts, very accurate statistics were kept of 3,262 persons treated. Of this number, 2,647 were male and 615 female. The stated causes of addiction were as follows: Illness, 429; other causes, curiosity, pleasure, trouble, etc., 351; association, 2,482. Among the age groups, 968 were between 15 and 19 years, 927 between the ages of 20 and 25 years, 711 between the ages of 26 and 30 years, 523 between the ages of 31 and 40 years, and 133, 41 years or over.

In connection with these statistics, Dr. Copeland says:—

“To my mind the most striking thing about these figures is that the large majority of the patients are under 25 years of age, and nearly one-third are not out of their teens. Our patients are just misguided and unfortunate boys and girls—mere children. That more persons past the age of 40 do not appear means that the addict dies young, a ready victim of tuberculosis or some other acute infection, or the drug traffic on the present scale is so recent that only the young are at present affected.”

Arrangements have been made for closer co-operation between the provincial and municipal authorities with a view to making a concerted effort to stamp out the narcotic drug evil in Canada.

(7) PROPRIETARY OR PATENT MEDICINES

Medicines registered and licensed under the Proprietary or Patent Medicine Act numbered 4,868. These preparations comprised tonics, headache powders, pills, liniments, salves, etc., and were for the most part manufactured in Canada, but considerable quantities were imported from England, France, United States and Germany.

Of the number referred to, about 100 contained alcohol in excess of 2½ per cent and were approved by the Advisory Board as containing sufficient medication to prevent their use as alcoholic beverages. During the period under review, 50 per cent of the registration numbers previously assigned alcoholic tonic wines were cancelled, chiefly at the request of the manufacturers, who apparently found that the medication insisted upon by the Advisory Board rendered their products unsaleable.

Many articles presented for registration were rejected as absolute frauds or dangerous to health. The general tone of advertising medicines, subject to this Act, very noticeably improved and violations of its provisions materially decreased. So far as the Department has been able to ascertain, the proportion of scheduled drugs used in medicines registered thereunder did not exceed the quantities permitted.

It may be pointed out, however, that many manufacturers chose the alternative of printing on the labels and wrappers the formula or full list of medicinal ingredients and proportion of scheduled drugs present in their preparations and thus claimed exemption from the requirements of the Act.

(8) DIVISION OF CHILD WELFARE

General co-operation in matters relating to child and maternal welfare has been continued or established as follows:—

(a) *Department of Immigration, Women's Branch.*—Conferences re the care and welfare of women and children arriving at the ports and immediately thereafter. Special attention to young women going into domestic service and to those coming out to be married in Canada.

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(b) *Department of the Interior*.—Conference *re* child welfare and maternal welfare in the Northwest Territories and the Yukon. Information on file.

(c) *Department of Trade and Commerce, Dominion Bureau of Statistics*.—Frequent conferences have been held with the Dominion Statistician *re* vital statistics, *re* statistics on education, statistics *re* juvenile delinquents, and statistics *re* age, height, weight.

(d) *Department of Agriculture*.—Conferences *re* the use of milk for children and mothers.

(e) *Department of Indian Affairs*.—Conferences *re* welfare of Indian children and the providing of publications for Indian mothers.

(f) *Department of Soldiers' Civil Re-establishment*.—Conferences *re* dietary and other matters relating to child and maternal welfare.

(g) *Soldiers' Settlement Board—Home Branch*.—Conferences *re* home welfare and distribution of literature also preparation of new publications.

CO-OPERATION WITH THE PROVINCES

Co-operation with all the provinces of Canada in regard to child and maternal welfare has made continued progress during the year. Perhaps the best instance of this is the fact that over five hundred persons, representing about fifty different departments or boards of Provincial Governments, co-operated directly in the preparation of the "Hand-book of Child Welfare Work in Canada," published March 27, 1923.

CO-OPERATION WITH VOLUNTARY SOCIETIES

Co-operation with voluntary societies and private individuals has advanced in like manner. We are in constant communication with all the voluntary organizations of a national character and with a much larger number of Provincial and local associations who are working more or less directly for child welfare. The number of letters and telegrams received—2,241—and the fact that one hundred and fifty persons from all parts of Canada have called at the office during the year, illustrates this.

Opportunities for this work have increased during the year. Special mention may be made of the work of the Canadian Tuberculosis Association *re* the prevalence and prevention of tuberculosis in childhood. A subcommittee of the executive has this matter in hand and in addition to the first survey in Saskatchewan three other provinces are proceeding with the plan. It is hoped that about 1 per cent of the school population will be examined and that similar studies will be made of children of pre-school age. Meetings of this subcommittee have been regularly attended.

As before constant co-operation has been maintained with the Canadian Council of Child Welfare, the Canadian Association of Child Protection Officers, and with other voluntary associations and organizations, for the benefit of children who need special care, both local and general.

We are again indebted to the authors and publishers of books, pamphlets, periodicals and reports upon the subject of child welfare in all the provinces of Canada, in Newfoundland, in Great Britain, in India, South Africa, Australia, New Zealand, the United States, France and Belgium, for forwarding their publications.

Co-operation with provincial officials and authorities has been carried on as usual by correspondence, visits to the provinces from time to time, by personal interviews and by answering numerous requests for action and information con-

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cerning a great variety of subjects within the scope of child and maternal welfare and home interests. On the same general plan, co-operation has been carried on during the year with private individuals, and Voluntary Societies engaged in the work of child welfare.

PUBLICATIONS OF DIVISION

A "Handbook of Child Welfare Work in Canada" has been prepared and published during the year. This book consists of a brief statement, compiled from official reports and other authoritative sources, of the work for child welfare which was carried on in Canada during the official year ended March 31, 1922. The "Handbook" was published on March 27 and about 7,000 copies were mailed on or about March 31. The cordial co-operation and help of the members of the Dominion Council of Health and of the provincial authorities rendered it possible to present a general view of child welfare work in Canada. It is hoped that the "Handbook" may be found useful for reference and other purposes.

THE CANADIAN MOTHER'S BOOK

It became necessary to prepare a new and revised edition of "The Canadian Mother's Book" during the year, new material being available since March 3, 1921, when it was first issued, and the plates used for the original book being worn out.

New illustrations have been added to the book, which contains about fifty pages more than the original edition and is divided into chapters. An index has been added by request and several tables.

"The Canadian Mother's Book" has been translated into Ruthenian and is appearing serially in *Ranok*, a Ruthenian paper published in Winnipeg.

Special requests have been made from time to time, especially by the Home Branch of the Soldiers' Settlement Board, for a little book for mothers in out-post homes, who may fear that medical and nursing aid may not be available at the time of the birth of the baby. Such a publication has been written and discussed with several authorities. It is now ready for publication and it is intended that one thousand only be printed, until we can ascertain whether or not a larger distribution is advisable.

THE LITTLE BLUE BOOKS—HOME SERIES

The Little Blue Books—Home Series have been reprinted several times during the year, both in English and French. It is now intended to prepare and publish as soon as possible, new and revised editions in English and French, of all the fourteen Little Blue Books, arranged in three series, as follows:—

The Mother's Series:

1. The Canadian Mother's Book.
2. How To Take Care Of The Baby.
3. How To Take Care Of The Mother.
4. How To Take Care Of The Children.
5. How To Take Care Of The Father and The Family.

The Home series:

1. Beginning Our Home In Canada.
2. How To Build Our Canadian House.
3. How To Make Our Canadian Home.
4. How To Make Our Outpost Home In Canada.
5. How To Prevent Accidents And Give First Aid.

The Household Series:

1. Canadians Need Milk.
2. How We Cook In Canada.
3. How To Manage Housework in Canada.
4. How To Take Care of Household Waste.
5. Household Cost Accounting in Canada.

FALL FAIR POSTERS

In the month of July, 1922, posters were prepared in English and in French and lithographed for use at the fall fairs and exhibitions. The posters gave the list of publications in child welfare and directions as to how these might be obtained free. It was found that there are over eight hundred of these exhibitions and the postcards, which accompanied the posters were filled out in many hundreds of cases. The total number of posters sent out was 1,400 and postcards sent out 40,000.

During the month of October alone 7,315 of these pastcards, duly filled, were returned with requests for publications.

CARDS FOR DISTRICT REGISTRARS

The "Card for the Baby's Mother," approved by the Chief Provincial Medical Officers of Health and first issued in 1921 to the district registrars, has been more successful than ever before in this, the third year of issue. No day passes without a little pile of these cards coming back in the mail and they come from all the provinces. The words "This Card is for the Baby's Mother" are printed in red on the face of the card is intended to be forwarded to the mother when the birth is registered by favour of the person registering the birth. We have received thousands of these cards during the year, returned to us duly filled out with the mother's name and address as requesting a copy of "The Canadian Mother's Book."

HOME SERVICE

Every year the national importance of this matter becomes more urgent. In addition to the work of the Department of Immigration, Women's Branch, in which we have had the privilege of co-operating (see above) it is well known that the Governments of Ontario, Saskatchewan and British Columbia have respectively taken steps to meet the need and that their plans have met with a measure of success. In these provinces and in the other provinces of Canada, the Salvation Army is engaged in efforts which have the same general aim, and in some provinces the authorities have expressed their wish to approve and support the work of the Salvation Army rather than to engage in such work themselves.

In the province of Saskatchewan the plan of "Nursing Housekeepers" has been devised and carried out and in some of the cities of Canada, the local health authorities, in co-operation with voluntary associations, are considering ways and means to meet the need of supplementing pre-natal care by some form of home service, and securing, if possible that such home service shall be made available, for a reasonable charge, or if necessary, free of charge, at the time of the birth of the baby and for a little time thereafter, until the mother has regained her strength.

An opportunity offered in December, 1922, to give a public address on "Home Service and Public Health" and two articles upon the same general subject have been prepared, which it is hoped may appear in some popular magazine published in Canada, and may help to direct public attention to this subject.

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OUTPOST HOMES

Increased attention has been given to this subject during the year and further knowledge of the situation has been gained by enquiry, conference and correspondence. Public opinion is becoming better informed as to the need of medical and nursing care in these homes and the necessity of some domestic assistance, at least for a short time, immediately before and after the birth of the baby.

CHILDREN NEEDING SPECIAL CARE

As will be seen by reference to the "Handbook", marked progress has been made during the year in regard to the education and supervision of children who, for any reason, require special care.

AGE—HEIGHT—WEIGHT

Statistics *re* the age—height—weight of school children in Toronto, were compiled by the Division of School Medical, Dental and Nursing Service of the Department of Health, Toronto, in September, 1922, and it was arranged that the Dominion Bureau of Statistics should tabulate these figures from the cards as supplied by the Toronto Department of Health. The results so obtained were forwarded to the Toronto authorities early in March, 1923, and a copy sent to this division.

The following opinion is expressed by Mr. E. S. Macphail, Superintendent of the Division of Demography in the Dominion Bureau of Statistics, under whose direction the work was done, in a letter dated March 9, 1923:—

"I think the tables showed some very interesting facts and compared rather favourably with those procured by Dr. Wood, of the United States Government."

FOOD AND DRUGS DIVISION

GENERAL

Samples of food and drugs were examined at the laboratories of the department, as follows:—

OTTAWA

| | | | |
|--------------------------|-----|----------------------------|-----|
| Alcohol..... | 4 | Baking powder..... | 3 |
| Balsam of honey..... | 1 | Basic salg..... | 3 |
| Beans..... | 29 | Beer..... | 1 |
| Black pepper..... | 95 | Blood meal..... | 2 |
| Bread..... | 3 | Bone meal..... | 2 |
| Butter..... | 115 | Camphorated oil..... | 20 |
| Candy..... | 1 | Canned tomatoes..... | 3 |
| Catsup..... | 3 | Cell-u-flour..... | 1 |
| Cheese..... | 11 | Cheese colour..... | 10 |
| Chili con carne..... | 1 | Chili sauce..... | 1 |
| Chloroform..... | 6 | Chocolates..... | 1 |
| Chow Chow..... | 2 | Cider..... | 11 |
| Cloves..... | 1 | Cocoa..... | 4 |
| Cocoonut oil..... | 1 | Coffee..... | 6 |
| Cotton seed meal..... | 1 | Cream..... | 1 |
| Cream of tartar..... | 7 | Custard..... | 1 |
| Custard powder..... | 1 | Darco..... | 1 |
| Decorticated pepper..... | 1 | Desiccated vegetables..... | 4 |
| Disinfectants..... | 2 | Drugs..... | 463 |
| Dubbing..... | 2 | Dye..... | 1 |
| Egg albumen..... | 16 | Egg desiccated..... | 1 |
| Egg dried..... | 5 | Egg whole..... | 4 |
| Egg whole powder..... | 1 | Egg yolk..... | 2 |
| Enamel..... | 1 | Eucalyptus oil..... | 1 |

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| | | | |
|--------------------------------------|-----|-------------------------|-------|
| Extract of cinchona..... | 4 | Extract of lemon..... | 5 |
| Extract peppermint..... | 10 | Extract of vanilla..... | 1 |
| Feeds..... | 224 | Fertilizers..... | 144 |
| Figs..... | 9 | Fish..... | 14 |
| Flour..... | 2 | Fluids..... | 1 |
| Full meal..... | 1 | Fowler's solution..... | 1 |
| Gasoline..... | 1 | Gelatine..... | 20 |
| Ginger..... | 1 | Glander salts..... | 1 |
| Glycine..... | 2 | Grape juice..... | 1 |
| Hamburg steak..... | 9 | Headache powders..... | 9 |
| Honey..... | 12 | Ice cream..... | 1 |
| Icing sugar..... | 4 | Inks..... | 4 |
| Instrument oils..... | 4 | Iron brew..... | 1 |
| Izal..... | 1 | Jams..... | 83 |
| Jelly..... | 12 | Jirah bread..... | 1 |
| Jirah flour..... | 1 | Lemon sour..... | 4 |
| Linseed oil..... | 1 | Maple butter..... | 2 |
| Maple sugar..... | 4 | Maple syrup..... | 55 |
| Marmalade..... | 2 | Meat..... | 1 |
| Meat potted..... | 4 | Medicines..... | 6 |
| Milk foods..... | 2 | Molasses..... | 1 |
| Mushrooms..... | 1 | Nutmegs..... | 4 |
| Nuts..... | 15 | Oil..... | 14 |
| Oil of wintergreen..... | 2 | Oleomargarine..... | 15 |
| Olive oil..... | 30 | Olives..... | 4 |
| Orangeade..... | 2 | Paints..... | 12 |
| Paints and varnishes..... | 13 | Paraffin..... | 2 |
| Peas..... | 1 | Pectin..... | 1 |
| Pepper shells..... | 2 | Pie filling..... | 2 |
| Poisons..... | 10 | Pork and beans..... | 3 |
| Port wine..... | 2 | Preservatives..... | 3 |
| Prunes..... | 1 | Puddings..... | 4 |
| Pure sugar and cream and butter..... | 1 | Rangoon oil..... | 1 |
| Red lead..... | 1 | Raspberry jam..... | 1 |
| Saltpetre..... | 2 | Saddle soap..... | 4 |
| Sarsaparilla..... | 1 | Salus..... | 2 |
| Seidlitz powders..... | 1 | Sausages..... | 27 |
| Shellac..... | 1 | Shaving cream..... | 1 |
| Sirop d'Anis Gaugin..... | 1 | Shrimps..... | 2 |
| Soft drinks..... | 6 | Soap..... | 26 |
| Spirits Aromatic amm..... | 1 | Soups..... | 6 |
| Spirits of nitre..... | 5 | Spirits of camphor..... | 7 |
| Sugar..... | 1 | Stock tonic..... | 1 |
| Syrup..... | 10 | Sweet oil..... | 1 |
| Tablets..... | 1 | Syrup laval..... | 1 |
| Tincture of digitalis..... | 1 | Tanlac..... | 6 |
| Tonic wines..... | 26 | Tincture of iodine..... | 6 |
| Vanilla beans..... | 1 | Tomato paste..... | 1 |
| Vegetables..... | 1 | Turpentine..... | 12 |
| Vinegar malt..... | 3 | Varnish..... | 1 |
| Water..... | 1 | Vinegar..... | 5 |
| White lead..... | 1 | Vinegar spirit..... | 4 |
| | | White sauce..... | 1 |
| | | Wine..... | 2 |
| | | Total..... | 1,860 |

HALIFAX

| | | | |
|---|----|--|-----|
| Maple sugar..... | 10 | Honey..... | 18 |
| Confectionery..... | 16 | Molasses..... | 1 |
| Butter..... | 5 | Olive oil..... | 14 |
| Evaporated fruit..... | 8 | Ginger..... | 20 |
| Pepper..... | 24 | Cloves..... | 5 |
| Allspice..... | 4 | Seasoning..... | 2 |
| Cream tartar..... | 16 | Coffee..... | 4 |
| Egg powder..... | 1 | Gluten flour..... | 1 |
| Lemon extract..... | 26 | Other flavouring extracts..... | 10 |
| Lime juice..... | 3 | Cider..... | 2 |
| Fruit syrup..... | 2 | Vinegar..... | 3 |
| Spices (imported)..... | 11 | Preservaline..... | 2 |
| Turpentine..... | 2 | Opium and narcotic drugs..... | 11 |
| Fertilizers (Department Agriculture)..... | 70 | Feeding stuffs (Department Agriculture)..... | 43 |
| Butter (Department Agriculture)..... | 5 | Wash and spirits (Customs)..... | 16 |
| Water..... | 4 | Spices..... | 2 |
| Liquor..... | 3 | Total..... | 364 |

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MONTREAL

| | | | |
|---------------------------|-----|-------------------------|-----|
| Baking powder..... | 4 | Mana..... | 2 |
| Bromo seltzer..... | 1 | Maple cream..... | 1 |
| Butter..... | 141 | Maple sugar..... | 17 |
| Camphorated alcohol..... | 3 | Maple syrup..... | 15 |
| Camphorated oil..... | 5 | Milk..... | 27 |
| Catsup..... | 1 | Mineral water..... | 2 |
| Cherry candies..... | 1 | Molasses..... | 6 |
| Cinnamon..... | 4 | Mustard..... | 4 |
| Cloves..... | 5 | Olive oil..... | 31 |
| Cocoonut oil..... | 2 | Patent medicine..... | 1 |
| Coffee..... | 2 | Pepper—White..... | 8 |
| Cognac flavour..... | 1 | Pepper—Black..... | 29 |
| Cordial St. Francois..... | 1 | Pepper—Red..... | 2 |
| Corn (canned)..... | 4 | Peppermint extract..... | 2 |
| Cream..... | 12 | Ratafia extract..... | 1 |
| Cream of tartar..... | 2 | Salad oil..... | 2 |
| Eggs (shelled)..... | 1 | Salmon (canned)..... | 1 |
| Ginger..... | 34 | Sausages..... | 17 |
| Ginger extract..... | 1 | Schultz powders..... | 3 |
| Glycerine..... | 2 | Strawberry extract..... | 1 |
| Ham (pressed)..... | 1 | Syrups..... | 2 |
| Headache powder..... | 1 | Tincture of iodine..... | 5 |
| Honey..... | 10 | Tomatoes (canned)..... | 3 |
| Hydrogen peroxide..... | 1 | Vanilla extract..... | 3 |
| Lemon extract..... | 31 | Vinegar..... | 12 |
| | | Total..... | 468 |

CUSTOMS IMPORTS

| | | | |
|----------------------|---|---------------------|----|
| Anchovies..... | 2 | Pure white lac..... | 1 |
| Beans..... | 2 | Preservaline..... | 2 |
| Chaulmoogra oil..... | 1 | Walnuts..... | 3 |
| Dry figs..... | 1 | | |
| Gluten bread..... | 1 | Total..... | 13 |

SUBMITTED BY THE ROYAL CANADIAN MOUNTED POLICE

Narcotic drugs..... 130

SUBMITTED BY THE DEPARTMENT OF AGRICULTURE

| | | | |
|-------------|----|---------------------|-----|
| Butter..... | 87 | Feeding stuffs..... | 139 |
| Mana..... | 4 | Fertilizers..... | 42 |
| Cheese..... | 10 | | |
| | | Total..... | 282 |

WINNIPEG

| | | | |
|-----------------------------------|----|--------------------------------------|-----|
| Allspice, ground..... | 3 | Green River syrup..... | 1 |
| Baking powders..... | 4 | Honey, comb..... | 1 |
| Camphorated oil..... | 4 | Honey, strained..... | 22 |
| Camphor, spirits of..... | 1 | Iodine, tincture of..... | 4 |
| Cassia, ground..... | 3 | Jelly powders..... | 3 |
| Cayenne..... | 1 | Lard..... | 5 |
| Canned fruits and vegetables..... | 23 | Lemon flavouring extract..... | 38 |
| Chocolate candy..... | 35 | Mace, ground..... | 3 |
| Cloves, ground..... | 8 | Maple syrup..... | 17 |
| Cocoa..... | 9 | Mustard, ground..... | 3 |
| Coffee, ground..... | 17 | Mustard, prepared..... | 2 |
| Condensed milk..... | 1 | Olive oil, prepared..... | 15 |
| Cream of tartar..... | 3 | Oranges..... | 2 |
| Egg powder..... | 1 | Pepper, ground, black and white..... | 55 |
| Friar's balsam..... | 1 | Vanilla extract..... | 15 |
| Ginger, ground..... | 27 | | |
| | | Total..... | 327 |

FROM FEDERAL DEPARTMENTS

| | |
|--|-----|
| Department of Agriculture, Dairy Division, butter..... | 12 |
| “ “ Seed Branch, feeds..... | 196 |
| “ “ “ fertilizers..... | 10 |
| “ Customs and Excise, Customs, beans..... | 32 |
| “ “ “ celery..... | 26 |
| “ “ “ nutmegs..... | 1 |
| “ “ “ Excise, liquors..... | 60 |
| “ R.C.M.P., Excise liquors..... | 10 |
| “ “ Indian Act liquors..... | 2 |
| “ “ narcotics..... | 73 |
| “ Soldiers' Civil Re-establishment, canned goods..... | 131 |

FROM PROVINCIAL GOVERNMENT DEPARTMENTS

| | |
|--|----|
| Manitoba Temperance Act Administration, liquors for alcohol..... | 40 |
|--|----|

SAMPLES FROM OTHER SOURCES

| | |
|------------------------------------|-----|
| City of Winnipeg, narcotics..... | 5 |
| " Moose Jaw, canned corn..... | 3 |
| " " milk..... | 1 |
| Beverages for alcohol content..... | 25 |
| Beef and pork fat residues..... | 2 |
| Camphor, spirits of..... | 2 |
| Epsom salts..... | 1 |
| Feed..... | 1 |
| Gelatine..... | 2 |
| Potted meats..... | 27 |
| Stock tonic..... | 1 |
| Vanilla flavour..... | 1 |
| Vinegar..... | 4 |
| Wines, tonic..... | 2 |
| Total..... | 670 |
| Total samples..... | 997 |

One shipment of 930 pounds of nutmegs was refused entry into Canada, on account of excess of mouldy and wormy nutmegs. A shipment of potted meats, examined for the importer, was declared unfit for food. This shipment was subsequently destroyed. On account of alleged illness from eating sprayed celery, all imported shipments were examined for arsenic adhering sprays. Twenty-six carloads have been examined during the last three months of the fiscal year.

VANCOUVER

| | | | |
|--------------------------------------|-----|---|-----|
| Albumen, dried egg..... | 6 | Flour, cake ("Swans' Down")..... | 1 |
| Allspice, ground..... | 6 | Flour, diabetic ("Jirch & Premier")..... | 2 |
| Almonds, whole blanched..... | 1 | Flour, sausage..... | 2 |
| Apples, evaporated..... | 18 | Gelatin..... | 2 |
| Ashes, wood..... | 8 | Ginger, ground..... | 1 |
| Asparagus, canned..... | 1 | Ginger, preserved..... | 4 |
| Baking powder material..... | 2 | Grapefruit, fresh..... | 1 |
| Beans, Asiatic..... | 135 | Honey..... | 2 |
| Betel nut sweetmeats..... | 2 | Jam, gooseberry..... | 1 |
| Butter..... | 8 | Jam, plum and orange..... | 6 |
| Cassia bark..... | 2 | Labels..... | 1 |
| Cherries, canned..... | 1 | Lard purifier..... | 1 |
| Chicory ground..... | 1 | Lemons, fresh..... | 1 |
| Cider, apple..... | 4 | Mace, ground..... | 3 |
| Cigarette for opium..... | 1 | Mace, whole..... | 4 |
| Cloves, whole..... | 5 | Medicines, pills and herbs, Oriental..... | 21 |
| Cocoa beans..... | 7 | Milk, canned whole..... | 2 |
| Cocoa powder..... | 1 | Milk, fresh whole..... | 1 |
| Cod, smoked black..... | 1 | Milk, powdered whole..... | 2 |
| Coffee substitute..... | 1 | Milk, dry skimmed ("Dryce")..... | 1 |
| Corn, canned..... | 1 | Mustard, French..... | 1 |
| Cream, canned ("Keepsweet")..... | 1 | Mustard, flour..... | 1 |
| Cream thickener ("Cremo Vesco")..... | 1 | Nutmegs, whole..... | 2 |
| Dates, dried..... | 1 | Oil, olive..... | 11 |
| Drugs, narcotic..... | 78 | Oil, cottonseed ("Wesson")..... | 3 |
| Drugs, suspected..... | 2 | Oil, rapeseed..... | 4 |
| Dyes..... | 4 | Oranges, fresh..... | 486 |
| Eggs, fresh and salted..... | 22 | Paprika, ground..... | 2 |
| Eggs, dried yolk..... | 2 | Pastes, meat and fish..... | 309 |
| Egg powder ("Crysova")..... | 1 | Peanuts in shell..... | 1 |
| Eggs, dried whole..... | 8 | Peas, canned..... | 2 |
| Egg product ("Glaze")..... | 1 | Pepper, black ground..... | 1 |
| Essences, powdered..... | 1 | Pepper, black whole..... | 5 |
| Extract, vanilla compound..... | 1 | Pepper, white ground..... | 1 |
| Feeding stuffs, commercial..... | 72 | Pepper, white whole..... | 6 |
| Fertilizers, agricultural..... | 37 | Pineapple, canned..... | 1 |
| Figs, dried whole..... | 24 | Port ("Wilson's Tonic")..... | 1 |
| Figs, prepared..... | 3 | Rice..... | 1 |
| Flavouring syrup ("400")..... | 1 | Sage, rubbed..... | 1 |
| Flavourings..... | 1 | Salmon, canned..... | 1 |

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| | | | |
|-------------------------|----|----------------------------|-------|
| Salmon, smoked..... | 1 | Tomatoes, fresh whole..... | 1 |
| Sausage..... | 3 | Tomato paste, Italian..... | 2 |
| Seasoning, sausage..... | 1 | Vanilla beans..... | 4 |
| Soil, muck..... | 1 | Vinegar, malt..... | 1 |
| Spaghetti, canned..... | 1 | Walnuts meats..... | 42 |
| Spices, ground..... | 2 | Walnuts, in shell..... | 6 |
| Sugar, refined..... | 10 | Whiskey..... | 4 |
| Tomatoes, canned..... | 1 | Wine..... | 1 |
| Totals..... | | | 1,453 |

SPECIAL OBSERVATIONS

Jams and Jellies.—Upwards of 100 samples of jam and jelly were examined in which nothing of an injurious nature was detected. The chief criticism to be offered is that all indications point to a large quantity of prepared pectin being used by many jam manufacturers. While there is nothing harmful about the pectin itself, its presence does away with the necessity of a considerable percentage of fruit when attempting to get a jam of heavy consistency. Consequently, the consumer is often paying for sweetened pectin when what he wants is a pure fruit jam. In some ways, it is a difficult matter to control, but work is being done along this line and the future outlook is promising.

Several samples of jam were found to contain glucose without the presence of this ingredient being stated on the label. Prosecution proceedings were instituted with the result that fines were imposed and the jams properly labelled. From the manufacturer's viewpoint, glucose has several points to recommend it, chief among which are its low price and its ability to resist crystallization. Unfortunately its presence in any considerable quantity gives a decidedly inferior flavour to the produce and is consequently not considered a proper ingredient in *pure jams*.

Cider Vinegar.—Out of a collection of 47 samples of cider vinegar, only 17 proved to be genuine. Prosecution proceedings were instituted and fines collected in all cases of adulteration. When it is remembered that the manufacture of cider vinegar provides one way at least of utilizing a large part of the apple crop which may not be directly saleable, it will be recognized that to allow a cheaper adulterated article to be offered for sale under the same name is to place a severe handicap upon the cider vinegar industry and consequently upon the fruit grower.

Diluted acetic acid, coloured with caramel, seems to be one favourite method of simulating a pure cider vinegar, just sufficient cider vinegar to give a slight flavour and colour of the genuine article.

A close watch has been kept upon this particular product with the result that the market is much freer of the adulterated article than was the case a year ago.

Hamburg Steak and Sausages.—Certain manufacturers of prepared meats are still persisting in the use of colour and preservative in the preparation of their products. The *preservative* generally used is sodium bisulphite. The object of the preservative is, of course, to prevent fermentation in the meat, but such large quantities have been found at times as to suggest that the meat must have been tainted before being prepared, and so have required additional preservative to keep it from becoming unsaleable altogether.

When *colour* is used in meat preparations, neither the amount nor the nature of it are sufficient to be at all harmful to health. The chief objection, however, lies in the fact that they give the appearance of being smoked without the characteristic flavour or keeping quality.

Camphorated Oil (Linimentum Camphorae).—During the year 20 samples of this product were examined in the Ottawa laboratory. Unless otherwise designated, camphorated oil is required to conform to the requirements of the British Pharmacopoeia. Examination of the samples shows that there is still considerable adulteration practised. Possibly this is more often due to ignorance on the part of druggists than to a wilful disregard of requirements of the Pharmacopoeia. The chief defect found in the samples examined was the deficiency of camphor, in some cases the samples contained only half the amount of camphor required. In addition some of the samples were prepared by dissolving the camphor in cotton seed oil or in mineral oil. While the use of cotton seed oil is prescribed by the United States Pharmacopoeia, the British only permits the use of olive, sesame or peanut oil. Camphorated oil prepared with cotton seed oil complies with the requirements of the Food and Drugs Act if the letters U.S.P. are added to the name on the label.

Ground Ginger.—A collection of thirty-five samples of ground ginger was examined to determine the conformity of this article to the standards. The principal adulteration to which ginger is subjected at the present time is the exhaustion of the root by means of water or alcohol. The chief means of detecting this is a determination of the cold water extractive matter. In the samples examined the maximum percentage of cold water extract (dry basis) was 19.23 per cent and the minimum 11.69 per cent. Nine of the samples, however, contained slightly less water extractive matter than the standard of 13.3 per cent. Another point worthy of note is that much of the ground ginger is evidently prepared from the limed ginger root. In four of the samples the amount of lime present exceeded 2 per cent, the limit prescribed for limed ginger. There was no evidence of adulteration with foreign tissues.

Diabetic Foods.—Four samples of flour and three samples of bread sold for the use of sufferers from diabetes mellitus were examined. It is evident that there is still considerable ignorance or disregard of the regulations regarding this class of foods. Besides specifying the composition of gluten and gluten flour, the regulations require that diabetic foods offered for sale as breads, biscuits, cakes or otherwise, must contain not more than half as much glycogenic carbohydrates (sugars and starch) as the normal food of the same class.

Contract Samples.—One hundred and three samples of miscellaneous supplies purchased by various Government departments were examined to determine their conformity to specification. The knowledge that the articles supplied will be subject to analysis and that the shipment will be rejected if not in accordance with specification has considerable effect in raising the quality of the product supplied. As a result of these analyses, large sums of money have been saved and the value of analytical control of the purchase of supplies is becoming increasingly evident. The samples examined consisted mainly of soaps, paint materials and lubricating oils.

Canned Foods.—The rapid growth of the canning industry has made it necessary to give more attention to the sanitary aspect of food control. Almost every fresh food used is on the market in some state or form of preservation, i.e., canned, dehydrated or preserved and practically every such article when canned, processed and sterilized on scientific principles is a perfectly good and nutritious food. On the other hand, in the case of some canned goods, it is possible for an unscrupulous or careless canner to so process and spice inferior or decayed stock, such as tomato paste, that the finished product will be sterile and more or less attractive to the taste. Consequently the old plate culture methods are almost useless in the detection of this kind of adulteration. Greater

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weight is now given to the direct microscopical method. This, coupled with factory inspection, whenever possible, constitutes the most efficient way of controlling this class of foodstuffs. As knowledge of heat penetration in the processing of various canned foods increases, and as data on the thermal death-point of the different strains of organisms found on certain foods accumulate, the canner is enabled to sterilize scientifically and consequently has less and less excuse for putting on the market foodstuffs not wholly satisfactory.

During the past year a great deal of food, canned and dehydrated was destroyed as being unfit for human consumption. Whenever the safety factor was assured, sorting under supervision was permitted. The general policy of destroying all food that could not be declared sound and wholesome in every respect has been followed.

Burma or Rangoon Beans often contain dangerous amounts of hydrocyanic (prussic) acid. Hence it has been necessary to examine all importations of beans entering Canada and prohibit those containing more than 20 parts per million of hydrocyanic acid. Activity in this direction has practically eliminated these objectionable beans from the Canadian market.

Milk of Magnesia.—A limited collection of this article was made in order to ascertain the quality of the article as manufactured in Canada. Representative samples were taken and examined according to the U.S.P., 9th edition. All samples were found to meet the essential requirements. No extravagant therapeutic claims were made on the labels so that the article as sold locally (Ottawa) may be considered satisfactory.

Black Pepper was examined extensively throughout the country in 1917. Bulletin 379 contains these results and gives the percentage of adulteration as 13.9. A collection was made last August when some 70 samples were analysed and only two were declared adulterated.

Nutmegs.—It was found that shipments of this article which had been refused entry into the United States were being diverted to this country. The inspectors were immediately advised, with the result that several importations of nutmegs, unfit for food, were prohibited entry.

Dried Egg Products (egg albumen, flake egg, egg yolk, etc.).—Importations of these articles have received much attention. Because of the fact that these products were found to carry excessive quantities of zinc due to the method of dehydration in practice in the Orient, a zinc limit of 150 parts per million was put into force. Shortly after the United States and Canada began to refuse entry to these objectionable goods, a marked improvement in the quality became evident; due doubtless to the installation of modern methods of dehydration.

Nuts.—It has been found necessary to examine importations of nuts in the shell in order to prevent entry of low grade nuts, quantities of which were found on the market, and our efforts in this direction resulted in keeping out of Canada large quantities of low grade nuts. It is quite possible for this class of foodstuff to appear sound to the casual glance, yet the meats may be moldy, rancid or shrivelled. The buyer is thereby deceived, even though the article is sold cheaply. The average housewife does not always realize that a cheap article may prove more expensive in the end than the higher priced and better grade.

(10) PUBLIC WORKS HEALTH ACT

Following is a precis of the report upon the medical services and hygienic arrangements of the Welland canal, made by the Inspector of the Department of Health.

The section of canal now under construction covers a distance of approximately 13 miles, beginning at Port Weller on lake Ontario and extending in a southerly direction and ending at Port Robinson. This section is divided into subsections known as subsections 1 and 2, extending from Port Weller to North Thorold; subsections 3 and 4, extending from North Thorold to Allanburg; and subsection 5, extending from Allanburg to Port Robinson. The medical services covering these sections are arranged as follows:—

(a) A general hospital, with medical and nursing staff, placed at Homer, midway on the work of the three sections and in such a position as to allow easy transportation facilities. This hospital also constitutes the administrative centre of the service. The staff consists of:—

Medical staff—Chief medical officer, assistant medical officer.

Nursing staff—Matron in charge, assistant nurse, night nurse, as occasion demands.

Sub-staff—Cook, orderly and general man, additional help as occasion demands.

(b) A first-aid office at Thorold with an orderly in charge. Daily visits are made by one of the physicians. The services of a local physician are retained, as well, in cases where the attending physician cannot be reached at any time.

(c) Ambulance service consisting of the use of a gasoline track ambulance, a horse ambulance and the use of the Thorold motor ambulance as occasion requires.

ACTIVITIES OF THE SERVICE

These embrace sanitation and preventive medicine; medical attention and hospital care of the sick and injured; medical attention, care and special documentation of accident cases coming within the purview of the Workmen's Compensation Board; medical attention, care; reviewing of Pension Allowance; special reports, etc., of returned soldiers.

(1) *Sanitation and Preventive Medicine*.—Personal visits of inspection are made and attention drawn to any unsanitary condition or suggestion for improvement given. In addition to this, pamphlets are issued from time to time affording advice and instruction to all concerned. At intervals of a few months an inspector of the Provincial Board visits the hospital and tours the sections. It is his duty to investigate not only the sanitary arrangements, but also those for the care of the sick and injured.

(2) *Medical Attention and Hospital Care of the Sick and Injured*.—This is carried out in the following way:—

(1) By first-aid, administered by some responsible person in charge of a first-aid medical chest.

(2) By the regular trips of a doctor over the work, such visits being systematically carried out twice a week. Numerous cases of minor illness or injury are seen and attended to. In this connection it is pointed out that, owing to the convenience of the Thorold first-aid office to the work and homes of the men, employees, as a rule, prefer to go to this office in the evening for medicines or dressings than to be attended to while at work.

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(3) By special visits of a doctor to those suddenly taken ill or injured on the work. The number of these attendances is as follows:—

| | |
|------------------------------|-----|
| From the hospital..... | 198 |
| From the Thorold office..... | 206 |
| Total..... | 404 |

(4) By visits to the sick and injured at their homes. Many men prefer to be with their relations rather than in hospital and it is the policy of this service to comply with their wishes in this respect so long as the patient's recovery is not retarded thereby. The number so attended is as follows:—

| | |
|------------------------------|-------|
| From the hospital..... | 257 |
| From the Thorold office..... | 986 |
| Total..... | 1,243 |

(5) By attention given to the sick and injured coming as out-patients to the hospital or the Thorold office. These men attend for the treatment of minor or more chronic complaints, and for surgical dressings. The number is as follows:—

| | |
|----------------------------|-------|
| At the hospital..... | 513 |
| At the Thorold office..... | 1,867 |
| Total..... | 2,380 |

(6) By the attention and care given in the wards of the hospital. These cases constitute the more serious cases of disease or injury. The hospital records give the following figures:—

| Month | In Hospital | Admitted | Discharged | Died |
|--------------------|------------------|----------|------------|----------|
| April..... | Nil | 1 | Nil | Nil |
| May..... | 1 | Nil | " | " |
| June..... | 1 | " | 1 | " |
| July..... | Nil | 1 | 1 | " |
| August..... | " | 6 | 4 | " |
| September..... | 2 | 5 | 5 | " |
| October..... | 2 | 3 | 1 | " |
| November..... | 4 | 4 | 3 | " |
| December..... | 5 | 8 | 9 | " |
| January..... | 4 | 8 | 7 | " |
| February..... | 55 | 4 | 3 | " |
| March to 15th..... | 5 | 5 | Nil | 1 (15th) |
| Totals..... | (Not applicable) | 45 | 34 | 1 |

*Hospital days, 885.

*NOTE.—A hospital day signifies the care of one patient for one day.

| Particulars of attention given | April 1, 1920, to Mar. 15, 1921 | Mar. 15, 1921, to Mar. 31, 1921 | Totals |
|--|--|--|--------|
| Special visits to sick or injured on the work..... | 404 | 26 | 430 |
| Men visited at their own homes..... | 1,243 | 60 | 1,303 |
| Out-patients attended at the hospital or Thorold office..... | 2,380 | 120 | 2,500 |
| Bed-patients in the hospital..... | 45 | 6 | 51 |
| Hospital days..... | 885 | 42 | 927 |

The first point of call of the inspector was to the hospital at "Homer," which is situated at a point about midway of the work and at a distance of

three miles from St. Catharines. It consists of an office, waiting-room, three wards and an operating room. Each ward comprises ten beds, making thirty in all. At the time of the inspector's visit there were ten beds in use. The patients were chiefly surgical cases; a number of fractures and one amputation. There is, unfortunately at present, not any "infectious disease" hospital, nor any suitable arrangement for reception of infectious patients in the present hospital. It is customary to place infectious patients in tents. Dr. McCombe, who is the physician in charge of the medical services, informed the inspector that there was at one time a small building used for this purpose, but this has outlived its usefulness. Dr. McCombe has brought the need for such a building to the attention of the contractors and engineers in charge of the work and is hoping that this need will soon be met.

The inspector's next visit was one of inspection of the quarters of the employees and the hygienic arrangements and medical services of sections 1 and 2; 3 and 4; and 5, which comprise all of the work now going on.

Sections 1 and 2 begin at Port Weller and extend to North Thorold. There are under construction in this area two huge concrete locks. Lock No. 1 is situated at Port Weller. There are employed over this area approximately 800 men. Of these 800, over 575 live in St. Catharines, leaving approximately 225 living in quarters in these sections. The quarters consist of sleeping cabins, dining-rooms and latrines, each separate and distinct buildings. The sleeping quarters, with one exception, are long, one-storey wooden buildings, approximately twelve feet in height at the highest point. The lighting is adequate, but the only ventilation is that provided by doors and windows. The beds consist of double decker bunks, placed along the walls. In some cases the building is partitioned into private rooms, each room containing two bunks. In some buildings individual sinks for ablution purposes are provided at one end of the building; in others, a trough with individual water taps is in use. The buildings are well lighted, but facilities for ventilation are inadequate. Louvred openings in the roof would be helpful. Bed coverings and personal linen are laundered in St. Catharines. Bed coverings are supplied by the contractors and are plentiful.

At lock No. 2 in this section there is an old farm house which is used for housing the employees of one of the subcontractors, Aikens and Innes. This building is antiquated, dilapidated, filthy, badly lighted—nearly all windows boarded up to replace broken glass—badly ventilated—holes in boarded windows stuffed with old bags—and totally unfit for human habitation. The engineer told the inspector that this building would not be used after last fall as the contract in that district would shortly be completed.

Dining-rooms.—These are first-class in every way; clean; well lighted and ventilated; windows screened from flies; facilities provided for ablution before meals; water for washing dishes, chlorinated.

Latrines.—These are well constructed, small outhouses. The majority are built over a pit but a number are provided with buckets. With few exceptions, they are screened from flies and chlorinated. As a matter of fact, the men defæcate to a great extent in the open, especially during the summer months, which is not devoid of danger during the fly season.

Water Supply.—Water was originally supplied by superficial wells consisting of a pipe sunk in the ground with pump attached. There were twelve of these. In July and August of 1921, there was an epidemic of diarrhœa of somewhat alarming proportions and, in consequence, the well water was examined and, as a result, ten of the twelve wells were condemned. The water is now brought to these two sections from St. Catharines in barrels. The barrels

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are frequently chlorinated. In addition, there is a large tank which is filled with water from lake Ontario. Each time this tank is filled, the water is chlorinated. This water is used chiefly for ablution purposes, but may safely be used for drinking. The ground around the buildings is kept free from rubbish.

Sections 3 and 4.—There are employed in these sections about 850 men, nearly all of whom live in Thorold. There is only one camp and dining-room in these sections. This is known as Rigby's camp. There are only 28 men living here. The buildings and out-houses are clean, well lighted and there is no over-crowding. At a central point in these two sections there is a "first-aid" hospital. This is in charge of an orderly who looks after the patient and does whatever is necessary while awaiting the arrival of the physician. In serious cases a local physician, who is employed for this purpose, is called.

Section 5.—This section extends from Allanburg to Port Robinson. Dredging only is being done on this section and the majority of the 200 men employed in that work live on dredges or tugs. The drinking water for the dredges and tugs is taken from the town of Thorold. Sewage from these barges and tugs is thrown into the canal, but as the canal water is not used for drinking purposes, no harm results.

A number of men employed on this section, approximately 40 in number, sleep and eat in an old hotel, known as Campbell's Hotel. This building is about one hundred years old. It is very dilapidated and in its present condition considered unfit for use. Unless thoroughly cleaned and renovated and the number of inhabitants restricted, it was recommended that it be condemned.

CONCLUSION

The inspector found that the provisions and regulations of "The Public Works (Health) Act" were with one or two exceptions, satisfactorily carried out. Ample provision is made for medical attendance, both in hospitals, in the homes and at the emergency first aid stations.

The hygienic arrangements of the several camps are, in the main, good. Provision is made for a pure water supply and the sewage from buildings and boats is in no way injurious to the health of the employees.

(11) FINANCIAL STATEMENT

STATEMENT of Expenditure for the Fiscal Year 1922-23

| Service | Gross Expend- iture | Refunds to Appro- priations | Net Expend- iture |
|---|---------------------------|-----------------------------------|-------------------------|
| | \$ cts. | \$ cts. | \$ cts. |
| The administration of the Acts respecting Food and Drugs, Honey and Maple Products and Opium and Narcotic Drugs..... | 114,432 63 | 2,868 04 | 111,564 59 |
| Proprietary or Patent Medicines..... | 2,633 51 | | 2,633 51 |
| Marine Hospitals, including grants to institutions assisting sailors..... | 118,350 66 | 3,623 88 | 114,726 78 |
| Quarantine: Salaries and contingencies of organized districts; Public health in other districts; Tracadie and D'Arcy Island Lazarettoes; Public Works Health Act..... | 227,328 83 | 2,326 83 | 225,002 00 |
| Immigration Medical Inspection..... | 50,025 15 | 93 43 | 49,931 72 |
| Medical Research—Standardizing and Testing Laboratory..... | 1,630 16 | 18 46 | 1,611 70 |
| Venereal Diseases..... | 189,927 85 | | 189,927 85 |
| Civil Government Salaries..... | 129,317 12 | | 129,317 12 |
| Civil Government Contingencies..... | 53,354 04 | 1,344 89 | 52,009 15 |
| Provisional Bonus Allowance..... | 21,677 18 | 671 56 | 21,005 62 |
| Miscellaneous Gratuities..... | 453 33 | | 453 33 |
| Reclassification Arrears..... | 900 00 | | 900 00 |
| Superannuation No. 4..... | 3,606 72 | | 3,606 72 |
| Medical Research Committee..... | 2,000 00 | | 2,000 00 |
| Canadian National Council of Child Welfare..... | 5,000 00 | | 5,000 00 |
| Canadian National Council for Combating Venereal Diseases..... | 5,000 00 | | 5,000 00 |
| | 925,637 18 | 10,947 09 | 914,690 09 |

STATEMENT of Revenue Collected from Various Sources for the Fiscal Year
1922-23

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|---------------|----------|-------------|
| | \$ cts. | \$ cts. | \$ cts. |
| "A"—Food and drugs..... | 15,833 53 | 90 00 | 15,743 53 |
| "B"—Opium and narcotic drugs..... | 18,875 64 | 1,390 00 | 17,485 64 |
| "C"—Patent medicines..... | 6,679 00 | 159 00 | 6,520 00 |
| "D"—Sick Mariners' dues..... | 161,758 85 | 748 92 | 161,009 93 |
| "E"—Casual revenue..... | 5,436 89 | 212 98 | 5,223 91 |
| Total..... | 208,583 91 | 2,600 90 | 205,983 01 |

"A"—FOOD AND DRUGS REVENUE FOR 1922-1923

| | Analysis | Fines and Forfeitures | Costs | Total |
|---------------------------|----------|-----------------------|----------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 30 00 | 150 00 | 60 00 | 240 00 |
| New Brunswick..... | 10 00 | 100 00 | 40 00 | 150 00 |
| Prince Edward Island..... | | 50 00 | 20 00 | 70 00 |
| Quebec..... | 102 00 | 2,632 96 | 920 00 | 3,654 96 |
| Ontario..... | 7,658 15 | 2,250 00 | 1,087 67 | 10,995 82 |
| Manitoba..... | 287 00 | 150 00 | 60 00 | 497 00 |
| Saskatchewan..... | 11 00 | 75 00 | 9 75 | 95 75 |
| British Columbia..... | 40 00 | 75 00 | 10 00 | 125 00 |
| Foreign..... | 5 00 | | | 5 00 |
| | 8,143 15 | 5,482 96 | 2,207 42 | 15,833 53 |
| Less Refunds..... | | 75 00 | 15 00 | 90 00 |
| | 8,143 15 | 5,407 96 | 2,192 42 | 15,743 53 |

"B"—OPIUM AND NARCOTIC DRUGS REVENUE

| | Business Licenses | Import Licenses | Export Licenses | Fines and Forfeitures | Total |
|-----------------------|-------------------|-----------------|-----------------|-----------------------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 90 00 | | | 567 50 | 657 50 |
| New Brunswick..... | 120 00 | | | 252 20 | 372 20 |
| Quebec..... | 1,160 00 | 605 00 | 30 00 | 4,287 00 | 6,082 00 |
| Ontario..... | 1,050 00 | 165 00 | 5 00 | 5,287 50 | 6,487 50 |
| Manitoba..... | 235 00 | | | 1,400 00 | 1,635 00 |
| Saskatchewan..... | 115 00 | | | 1,104 36 | 1,219 36 |
| Alberta..... | 145 00 | | | 662 50 | 807 50 |
| British Columbia..... | 120 00 | | | 1,489 58 | 1,609 58 |
| Foreign..... | | 5 00 | | | 5 00 |
| | 3,035 00 | 775 00 | 35 00 | 15,030 64 | 18,875 64 |
| Less Refunds..... | | 5 00 | | 1,385 00 | 1,390 00 |
| | 3,035 00 | 770 00 | 35 00 | 13,645 64 | 17,485 64 |

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"C"—PATENT MEDICINES REVENUE

| | Fines and Forfeitures | Registration Fees at \$2 each | License Fees at \$1 each | Total |
|---------------------------|-----------------------------|-------------------------------------|--------------------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 36 00 | 133 00 | 169 00 |
| New Brunswick..... | | 20 00 | 142 00 | 162 00 |
| Prince Edward Island..... | | 10 00 | 7 00 | 17 00 |
| Quebec..... | 51 00 | 498 00 | 1,404 00 | 1,953 00 |
| Ontario..... | | 716 00 | 2,094 00 | 2,810 00 |
| Manitoba..... | 10 00 | 80 00 | 185 00 | 275 00 |
| Saskatchewan..... | | 22 00 | 38 00 | 60 00 |
| Alberta..... | | 44 00 | 84 00 | 128 00 |
| British Columbia..... | | 60 00 | 135 00 | 195 00 |
| Foreign..... | | 172 00 | 738 00 | 910 00 |
| | 61 00 | 1,658 00 | 4,960 00 | 6,679 00 |
| Less Refunds..... | | 64 00 | 95 00 | 159 00 |
| | 61 00 | 1,594 00 | 4,865 00 | 6,520 00 |

"D"—SICK MARINERS' DUES REVENUE

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|---------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 35,657 76 | 390 30 | 35,267 46 |
| New Brunswick..... | 20,594 42 | 76 84 | 20,517 58 |
| Prince Edward Island..... | 757 12 | | 757 12 |
| Quebec..... | 54,432 88 | 179 30 | 54,253 58 |
| British Columbia..... | 50,316 67 | 102 48 | 50,214 19 |
| | 161,758 85 | 748 92 | 161,009 93 |

"E"—CASUAL REVENUE

| | Total Revenue | Refunds | Net Revenue |
|---|------------------|---------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Sale of properties..... | 3,500 00 | | 3,500 00 |
| Sale of sundries..... | 15 00 | | 15 00 |
| Fumigation certificates..... | 30 00 | | 30 00 |
| Miscellaneous refunds to previous years appropriations..... | 1,891 89 | 212 98 | 1,678 91 |
| | 5,436 89 | 212 98 | 5,223 91 |

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STATEMENT Showing the Net Amount of Sick Mariners' Dues Collected at Each Port and Outport

PROVINCE OF NOVA SCOTIA

| Ports and Outports | Net Revenue | Ports and Outports | Net Revenue |
|-------------------------|-------------|-------------------------|-------------|
| | \$ cts. | | \$ cts. |
| Amherst..... | | Kentville..... | |
| Tidnish..... | 4 00 | Kingsport..... | 86 14 |
| Pugwash..... | 46 96 | | |
| Joggins Mines..... | 71 84 | Liverpool..... | 201 92 |
| | 122 80 | Port Medway..... | 16 84 |
| Annapolis Royal..... | 8 12 | | 218 76 |
| Clementsport..... | 10 02 | Lockeport..... | 23 04 |
| Port Wade..... | 4 00 | | |
| Bridgetown..... | 4 24 | Lunenburg..... | 458 46 |
| | 26 38 | LaHave..... | 204 92 |
| Arichat..... | 2 00 | Mahone Bay..... | 7 42 |
| St. Peters..... | 59 28 | Riverport..... | 24 24 |
| River Bourgeois..... | 4 00 | | 695 04 |
| Descousse..... | 2 00 | North Sydney..... | 1,504 96 |
| L'Ardoise..... | 2 00 | Little Bras d'Or..... | 83 76 |
| Petit de Grat..... | 16 00 | | 1,588 72 |
| | 85 28 | Parsboro..... | 343 38 |
| Baddeck..... | 2 00 | Apple River..... | 31 00 |
| Munroe's Point..... | 259 22 | Port Greville..... | 17 36 |
| | 261 22 | Spencer's Island..... | 21 86 |
| Barrington Passage..... | 12 88 | Advocate Harbour..... | 7 08 |
| Wood's Harbour..... | 8 78 | Five Islands..... | 11 50 |
| Clark's Harbour..... | 14 26 | | 432 18 |
| Shag Harbour..... | 0 22 | Pictou..... | 243 14 |
| Port LaTour..... | 3 24 | Tatamagouche..... | 2 10 |
| | 39 38 | | 245 24 |
| Bridgewater..... | 69 32 | Port Hawkesbury..... | 18 28 |
| Canso..... | 61 44 | Port Hastings..... | 115 36 |
| Liscomb..... | 10 56 | | 133 64 |
| Larry's River..... | 2 00 | Port Hood..... | |
| Guysborough..... | 14 18 | Cheticamp..... | 24 00 |
| Sherbrooke..... | 38 74 | Margaree..... | 6 00 |
| Queensport..... | 2 00 | Grand Etang..... | 5 00 |
| | 128 92 | | 35 00 |
| Digby..... | 162 64 | Shelburne..... | 72 38 |
| Bear River..... | 17 92 | North East Harbour..... | 3 88 |
| Westport..... | 27 30 | Sandy Point..... | 53 24 |
| Ireport..... | 8 70 | | 129 50 |
| Tiverton..... | 4 00 | Sydney..... | 5,565 20 |
| | 220 56 | Louisburg..... | 943 76 |
| Halifax..... | 21,846 54 | | 6,508 96 |
| Sheet Harbour..... | 51 76 | Truro..... | |
| Spry Bay..... | 4 00 | Little Bass River..... | 31 98 |
| Ingram Port..... | 13 78 | | |
| Mosers River..... | 2 00 | | |
| Hubbards..... | 7 76 | | |
| Port Dufferin..... | 4 22 | | |
| | 21,930 06 | | |

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NOVA SCOTIA—Continued

| Ports and Outports | Net Revenue | Ports and Outports | Net Revenue |
|-----------------------|-------------|----------------------|-------------|
| | \$ cts. | | \$ cts. |
| Weymouth..... | 18 38 | Yarmouth..... | 322 20 |
| Church Point..... | 10 76 | N.E. Pubnico..... | 9 94 |
| Meteghan..... | 14 22 | Wedgeport..... | 2 94 |
| Belliveau's Cove..... | 31 40 | Abbotts Harbour..... | 0 32 |
| Salmon River..... | 4 00 | Port Maitland..... | 8 00 |
| | 78 76 | | 343 40 |
| Windsor..... | 1,005 14 | | |
| Walton..... | 354 44 | | |
| Hantsport..... | 472 72 | | |
| Cheverie..... | 2 00 | | |
| Noel..... | 16 42 | | |
| | 1,850 72 | | |

PROVINCE OF NEW BRUNSWICK

| | | | |
|------------------|--------|---------------------|-----------|
| Bathurst..... | 94 14 | Newcastle..... | 291 04 |
| Caraquet..... | 20 00 | Sackville..... | |
| Shippegan..... | 2 00 | Port Elgin..... | 6 08 |
| | 116 14 | St. Stephen..... | 75 62 |
| Campbellton..... | 392 20 | St. Andrews..... | 23 24 |
| Dalhousie..... | 150 82 | Grand Harbour..... | 8 00 |
| | 543 02 | North Head..... | 32 32 |
| Chatham..... | 657 58 | Lord's Cove..... | 20 00 |
| Richibucto..... | 133 46 | | 83 56 |
| Buctouche..... | 10 02 | St. John..... | 17,958 36 |
| | 801 06 | St. George..... | 80 46 |
| Fredericton..... | 5 32 | St. Martins..... | 142 52 |
| Moncton..... | 5 68 | Beaver Harbour..... | 12 00 |
| Hillsboro..... | 353 26 | Chance Harbour..... | 8 00 |
| Alma..... | 64 82 | | 18,201 34 |
| Shediac..... | 26 66 | | |
| Albert..... | 3 28 | | |
| Waterside..... | 15 16 | | |
| Harvey..... | 28 60 | | |
| | 497 46 | | |

PROVINCE OF PRINCE EDWARD ISLAND

| | | | |
|--------------------------|--------|-----------------|-------|
| Charlottetown..... | 486 38 | Summerside..... | 17 50 |
| Souris..... | 33 34 | Miminegash..... | 10 00 |
| Crapaud..... | 4 24 | Alberton..... | 13 30 |
| Grand River..... | 2 66 | Tignish..... | 2 00 |
| Murray River..... | 4 40 | | 42 80 |
| Murray Harbour..... | 6 00 | | |
| Georgetown..... | 18 86 | | |
| Montague..... | 36 32 | | |
| Vernon River Bridge..... | 1 52 | | |
| | 593 72 | | |

PROVINCE OF QUEBEC

| Port and Outports | Net Revenue | Port and Outports | Net Revenue |
|------------------------|-------------|-------------------|-------------|
| | \$ cts. | | \$ cts. |
| Gaspe..... | 397 90 | Rimouski..... | 105 82 |
| Montreal..... | 40,772 40 | Matane..... | 131 90 |
| | | | 237 72 |
| Paspebiac..... | 112 72 | Sorel..... | 13 12 |
| Carleton..... | 4 00 | St. Johns..... | 1,077 28 |
| Port Daniel..... | 5 88 | | |
| New Richmond..... | 73 98 | Three Rivers..... | 1,009 54 |
| | 196 58 | | |
| Quebec..... | 9,025 20 | | |
| Chicoutimi..... | 239 04 | | |
| Port Alfred..... | 833 56 | | |
| Seven Islands..... | 219 80 | | |
| Magdalene Islands..... | 69 98 | | |
| Bonne Esperance..... | 88 34 | | |
| Levis..... | 73 12 | | |
| | 10,549 04 | | |

PROVINCE OF BRITISH COLUMBIA

| | | | |
|----------------------|----------|----------------------|-----------|
| Nanaimo..... | 1,731 46 | Vancouver..... | 26,213 48 |
| Chemanius..... | 150 22 | Alert Bay..... | 6 00 |
| Union Bay..... | 666 06 | Powell River..... | 329 28 |
| Ladysmith..... | 598 18 | Britannia Beach..... | 11 52 |
| Port Alberni..... | 515 94 | | 26,560 28 |
| Kildonan..... | 235 84 | | |
| | 3,897 70 | | |
| New Westminster..... | 530 54 | Victoria..... | 17,606 85 |
| White Rock..... | 80 26 | Tofino..... | 25 54 |
| Stevetson..... | 34 40 | Sidney..... | 368 48 |
| | 645 20 | Quatsino..... | 226 46 |
| | | Port Renfrew..... | 6 00 |
| Prince Rupert..... | 603 54 | | 18,233 33 |
| Anyox..... | 83 36 | | |
| Ocean Falls..... | 190 78 | | |
| | 877 68 | | |

REPORT
OF THE
DEPARTMENT OF HEALTH

FOR THE
FISCAL YEAR ENDED MARCH 31, 1924

PRINTED BY ORDER OF PARLIAMENT



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1924

*To General His Excellency the Right Honourable Lord Byng of Vimy, G.C.B.,
G.C.M.G., M.V.O., Governor General and Commander in Chief of the
Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit, herewith, for the information of Your Excellency and the Parliament of Canada the Annual Report of the Department of Health, being for the year ended March 31, 1924.

I have the honour to be, sir,

Your Excellency's most obedient servant,

H. S. BÉLAND

Minister of Health.

OTTAWA, September 1, 1924.

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REPORT OF THE DEPARTMENT OF HEALTH

FOR THE FISCAL YEAR ENDED MARCH 31, 1924

OTTAWA, August 28, 1924.

Hon. H. S. BÉLAND, M.D.,
Minister of Health,
Ottawa.

SIR.—I have the honour to report on the Department of Health for the year ended March 31, 1924, under the following headings:—

1. Quarantine Service (including Leper Stations).
2. Immigration Medical Service.
3. Marine Hospitals Service.
4. Venereal Disease Control.
5. Housing, with Hospitalization and Sanitation.
6. Opium and Narcotic Drugs.
7. Proprietary or Patent Medicines.
8. Child Welfare.
9. Food and Drug Laboratories.
10. Public Works Health Act.
11. Pollution of Boundary Waters.
12. Financial Statement.

J. A. AMYOT,
Deputy Minister of Health.

(1) QUARANTINE SERVICE

Organized Quarantine Stations were maintained during the fiscal year at the following ocean ports:—

Charlottetown, P.E.I. (Keppoch),
Chatham, N.B. (Middle Island),
Halifax, N.S. (Lawlor's Island),
Louisburg, N.S.,
North Sydney, N.S.,
Quebec, Que. (Grosse Isle),
St. John, N.B., (Partridge Island),
Victoria, B.C. (William Head).

The following table shows the number of vessels and personnel inspected at the several stations:—

15 GEORGE V, A. 1925

| Station | Vessels inspected | Passengers | | | Crews | Cattlemen | Stowaways | Distressed seamen | Total persons inspected |
|-----------------------|-------------------|------------|---------------|----------|---------|-----------|-----------|-------------------|-------------------------|
| | | Cabin | Inter-mediate | Steerage | | | | | |
| Charlottetown, P.E.I. | 5 | ..... | ..... | ..... | 49 | ..... | ..... | ..... | 49 |
| Chatham, N.B. | 18 | ..... | ..... | ..... | 340 | ..... | ..... | ..... | 340 |
| Halifax, N.S. | 398 | ..... | 8,500 | 32,997 | 37,676 | 84 | 41 | 24 | 93,479 |
| Louisburg, N.S. | 39 | 14,157 | ..... | 1 | 1,367 | ..... | ..... | ..... | 1,378 |
| North Sydney, N.S. | 97 | 15 | ..... | ..... | 3,050 | ..... | 9 | ..... | 3,074 |
| Quebec, Que. | 862 | 4,303 | 36,088 | 86,198 | 71,313 | 587 | 169 | ..... | 198,653 |
| St. John, N.B. | 288 | 2,805 | 4,868 | 23,510 | 27,774 | 86 | 33 | ..... | 59,086 |
| Victoria, B.C. | 427 | 8,257 | 3,537 | 19,627 | 41,013 | | | 10 | 72,434 |
| Totals..... | 2,134 | 29,547 | 52,993 | 102,333 | 182,582 | 757 | 252 | 34 | 428,498 |

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Persons to the number of 758 were detained at Quarantine Stations. Of these, 189 were actually sick; the remainder, 569, either accompanied the sick or were contacts of the respective diseases. These latter include a large number detained for observation at the William Head Quarantine Station from vessels arriving with smallpox on board.

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY STATIONS

| Station | Sick | Hospital days | Contacts and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|------------------------------------|------|---------------|--|--------------------------|------------------------|---|
| Halifax, N.S. (Lawlor's Island)... | 32 | 407 | 36 | 460 | 68 | 867 |
| Quebec, Que. (Grosse Isle)..... | 127 | 1,435 | 219 | 1,849 | 346 | 3,284 |
| St. John, N.B. (Partridge Island) | 19 | 190 | 48 | 378 | 67 | 568 |
| Victoria, B.C. (William Head)... | 11 | 155 | 266 | 1,806 | 277 | 1,961 |
| Totals..... | 189 | 2,187 | 569 | 4,493 | 758 | 6,680 |

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY DISEASES

| Diagnosis | Sick | Hospital days | Contacts and persons accompanying sick | Period of detention in days | Total persons detained | Total days in hospital and detention quarters |
|-------------------------------|-------|---------------|--|-----------------------------|------------------------|---|
| Acute cold*..... | 16 | 98 | 7 | 43 | 23 | 141 |
| Biliousness*..... | 1 | 7 | 2 | 14 | 3 | 21 |
| Bronchitis*..... | 4 | 31 | 2 | 16 | 6 | 47 |
| Chickenpox..... | 29 | 475 | 34 | 472 | 63 | 947 |
| Coryza*..... | 1 | 2 | 1 | 2 | 2 | 4 |
| Dental abscess*..... | 1 | 4 | 2 | 8 | 3 | 12 |
| Diarrhoea*..... | 1 | 5 | ..... | ..... | 1 | 5 |
| Diphtheria..... | 1 | 7 | 7 | 49 | 8 | 56 |
| Drug rash*..... | 1 | 7 | ..... | ..... | 1 | 7 |
| Dysentery..... | 1 | 4 | 1 | 4 | 2 | 8 |
| Enteric fever..... | 2 | 85 | ..... | ..... | 2 | 85 |
| Erysipelas..... | 5 | 93 | 3 | 12 | 8 | 105 |
| Food rash*..... | 2 | 9 | 4 | 20 | 6 | 29 |
| Gastritis*..... | 1 | 4 | 1 | 4 | 2 | 8 |
| Impetigo*..... | 2 | 11 | 1 | 3 | 3 | 14 |
| Measles..... | 57 | 600 | 116 | 1,061 | 173 | 1,661 |
| Mumps..... | 9 | 68 | 17 | 94 | 26 | 162 |
| Peritonitis*..... | 1 | 8 | 2 | 16 | 3 | 24 |
| Pneumonia*..... | 1 | 15 | ..... | ..... | 1 | 15 |
| Pyrexia (unknown origin)..... | 9 | 39 | 28 | 119 | 37 | 158 |
| Refusing vaccination..... | ..... | ..... | 5 | 35 | 5 | 35 |
| Rhinitis*..... | 1 | 3 | ..... | ..... | 1 | 3 |
| Scabies*..... | 9 | 94 | 3 | 36 | 12 | 130 |
| Scarlet fever..... | 4 | 127 | 11 | 207 | 15 | 334 |
| Smallpox..... | 11 | 216 | 267 | 1,841 | 278 | 2,057 |
| Sore throat*..... | 2 | 14 | 3 | 12 | 5 | 26 |
| Teething*..... | 1 | 5 | 3 | 15 | 4 | 20 |
| Tonsillitis*..... | 10 | 88 | 33 | 238 | 43 | 326 |
| Typhus fever..... | 2 | 50 | 6 | 129 | 8 | 179 |
| Urticaria*..... | 1 | 4 | 6 | 24 | 7 | 28 |
| Vaccinia..... | 2 | 8 | 1 | 4 | 3 | 12 |
| Vincent's angina*..... | 1 | 6 | 3 | 15 | 4 | 21 |
| Totals..... | 189 | 2,187 | 569 | 4,493 | 758 | 6,680 |

* These cases were landed at Quarantine for observation on account of pyrexia, indicating possible infectious disease. Conditions were later diagnosed as stated.

15 GEORGE V, A. 1925

Commencing with the opening of navigation on the St. Lawrence river in the spring of 1923, the quarantine inspection base was transferred from Grosse Isle to Father Point, the quarantine officer now going on board vessels at the same time as the pilot. Any vessel found to have quarantinable or minor infectious disease on board was ordered to stop at Grosse Isle for the discharge of the sick and contacts. This new arrangement, together with the now established practice of clearing vessels passing Father Point during the night, on the sworn statement of the captain and ship's medical officer that the passengers and crew are free from quarantinable or other infectious disease, aids materially in the expeditious movement of vessels steaming up the St. Lawrence river.

The following extracts are from reports received from the respective quarantine officers:—

Grosse Isle, Quebec (Medical Superintendent, Dr. G. E. Martineau).—"The quarantine inspection of vessels arriving by the St. Lawrence, which had taken place at Grosse Isle since the year 1886, was this year carried out at Father Point, the steamers stopping at Grosse Isle only when they had cases of contagious disease to land, or when, for one reason or another, they could not be cleared at Father Point. For this purpose the assistant medical superintendent here was transferred to Father Point as quarantine officer in charge, and a fourth medical officer was appointed for service there, also a cabin steward to care for the doctors. Two residences were purchased at Father Point for the accommodation of the medical quarantine officers and their families.

"Eight hundred and sixty-two vessels arrived at Father Point which required inspection, and of these all but twenty were granted pratique there immediately on arrival. Of the twenty which passed Father Point without pratique, eighteen were cleared here, one at Chicoutimi and one at Levis, the two latter having passed quarantine on account of misunderstanding and the inspection boat being out of commission.

"Of these 862 steamers inspected, 142, or about 16 per cent, were passenger vessels, the remaining 720 being freight boats, ninety-two of which, however, carried from one to thirty-seven passengers, and one carrying 63.

"The total of 198,658 persons passing quarantine this season shows an increase of 56,457 over last year in the number of passengers, although the number of passenger steamers this year was thirteen fewer than that of last year. This marked increase is made up almost entirely of passengers travelling third-class, who numbered 32,837 in 1922, as compared with 86,198 in 1923, an increase of 53,361.

"Infectious diseases were reported or discovered on inspection fifty-nine times. The diseases so reported or discovered included typhus, smallpox, scarlet fever, diphtheria, measles, erysipelas, mumps, enteric fever, and pyrexia for observation. On several occasions steerage passengers refused to allow the ship's surgeon to vaccinate them or their children, but allowed the quarantine officer to do so.

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"Deaths and births occurring on board ships during the voyage were recorded as follows:—

| Name of Vessel | Number of deaths | Cause of deaths | Number of births |
|--------------------|------------------|-----------------------|------------------|
| Man. Regiment..... | 1 | Bronchitis..... | |
| Regina..... | 1 | Tuberculosis..... | |
| Megantic..... | 1 | Bronchitis..... | |
| Keyingham..... | 1 | Peritonitis..... | |
| Marloch..... | 1 | Epilepsy..... | |
| Metagama..... | 1 | Pulmonary cedema..... | |
| Marburn..... | 1 | Pneumonia..... | |
| Delaware..... | 1 | Accident..... | |
| Bruton..... | | | 3 |
| Totals..... | 8 | | 3 |

"The ss. *Swiftsure*, *Conia* and *San Macedonia* coming from Tampico, Mexico, where smallpox was reported to be present at the time they sailed, in May last, were ordered to call at Grosse Isle for final pratique and completion of fourteen days from the date of departure as required by the regulations.

"Following is a table of vessels arriving at Father Point with suspicious or positive cases of major quarantinable diseases on board and sent to Grosse Isle for diagnosis or necessary action to be taken:—

| Name of Vessel | Date arrived | Suspected disease | Disease diagnosed | Pratique granted |
|------------------------|--------------|-------------------|-------------------|------------------|
| Canadian Logger..... | May 21..... | | Alastrim..... | May 23 |
| Montrose..... | June 30..... | Smallpox..... | Varicella..... | June 30 |
| Regina..... | July 1..... | Typhus..... | Measles..... | July 1 |
| Megantic..... | July 8..... | Smallpox..... | Varicella..... | July 8 |
| Montcalm..... | Oct. 12..... | Typhus..... | Measles..... | Oct. 12 |
| Empress of France..... | Nov. 7..... | Typhus..... | Typhus..... | Nov. 9 |
| Montlaurier..... | Nov. 24..... | Smallpox..... | Varicella..... | Nov. 24 |

"The Government Merchant Marine steamer *Canadian Logger* arrived at Grosse Isle from Barbados, May 21, with a case of alastrim among her crew of twenty-seven. The bill of health mentioned five cases of alastrim at St. Lucia where she had touched. All members of crew who had been landed to be disinfected, together with their baggage, bedding, etc., were detained for quarantine and observation with the exception of two who had had smallpox. The steamer having been thoroughly disinfected was permitted to proceed on the 23rd in charge of a new crew sent down from Montreal for that purpose. The members of crew detained under observation having been vaccinated and revaccinated were released as soon as evidence of successful vaccination appeared or definite immunity reaction manifested itself; that is, seventeen on May 29, six on June 2, and one on June 5. The patient under treatment at the hospital was discharged as cured on June 16.

"The ss. *Empress of France* from Southampton via Cherbourg with 83 cabin, 129 intermediate, 739 steerage passengers, and 492 crew, arrived at quarantine at 1 p.m., November 7, with a case of high pyrexia and rash, very suspicious of typhus fever, among foreign steerage passengers. The patient, a child of five years old, with six members of her family, were immediately removed from the ship and hospitalized at the station, and the Weil-Felix test was made to ascertain the condition before allowing the vessel to proceed. Although the Weil-Felix test was negative, the clinical symptoms and history of the case were found so pathognomonic that we could not but conclude the pres-

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ence of typhus fever, the Typhus Research Commission of the League of Red Cross Societies to Poland reporting a failure of the test in 3 to 3.6 per cent of the cases, and Leonard Rogers in as many as 10 per cent. The 397 steerage passengers occupying the section of the ship where the case had developed and the forty-one crew attending to these were therefore landed at the Western Division of the station for quarantine and observation; and the fumigation of the emptied section and hospitals, of a cubic capacity of 133,000 feet, was carried out at once by burning 413 pounds of sulphur. All intermediate and remaining steerage passengers on board were also examined, but being found free from vermin, and not having been exposed to infection, they were permitted to proceed with the steamer, which left quarantine at 1.45 a.m., November 9. No new cases developed among the detained passengers and crew in the Western Division and, consequently, they were released on November 20 after having taken a disinfecting bath on arrival and having had all their personal effects, baggage, etc., thoroughly disinfected. One birth occurred during the detention, and it was necessary to transfer a female contact to the hospital for a case of abortion.

"Six hours after landing a secondary case of typhus fever developed at the hospital among the children of the family detained under observation for typhus, but it was of a milder form than the original case, which recovered slowly. This secondary case was able to leave the hospital with the rest of the family on December 1.

"The total number of days during which the above passengers and crews were detained is as follows:—

| | |
|----------------------------|-------|
| SS. Canadian Logger..... | 206 |
| SS. Empress of France..... | 5,256 |
| Total..... | 5,462 |

"The following cases of measles were overlooked on inspection at Father Point, or developed on the journey to Quebec, where they were found on arrival and returned to the station on the quarantine boat:—

| Name of Vessel | Date | Disease | Number of cases | Number of contacts |
|----------------|-------------|-------------|-----------------|--------------------|
| Regina..... | July 28.... | Measles.... | 3 | 7 |
| Regina..... | Aug. 25.... | " | 2 | 3 |
| Montclare..... | Nov. 10.... | " | 1 | 2 |
| Total..... | | | 6 | 12 |

"Vaccinations at the station were carried out during the year as follows:—

| | |
|-----------------------------------|-----|
| Staff and dependents..... | 74 |
| Crew of ss. Canadian Logger..... | 29 |
| Persons detained at hospital..... | 3 |
| Total..... | 106 |

"The persons admitted to the hospital were divided as follows with regard to their nationality:—

| | | | |
|---------------------|-----|------------------|---|
| British..... | 212 | Flemish..... | 5 |
| German..... | 22 | Belgian..... | 5 |
| Russian..... | 20 | Hungarian..... | 4 |
| Polish..... | 16 | American..... | 4 |
| Russian-German..... | 12 | Greek..... | 4 |
| Roumanian..... | 10 | Jugo-Slav..... | 4 |
| Canadian..... | 8 | Swiss..... | 4 |
| Swedish..... | 7 | Checho-Slav..... | 2 |
| Finnish..... | 6 | Norwegian..... | 1 |

Total..... 346

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"Six cases of chickenpox, five of measles, and one of typhus fever developed among the contacts detained under observation at the hospital. Of the chickenpox cases two developed nine days, three eleven days, and one fifteen days after landing. Three cases of measles developed almost on admission, one two days, and one three days afterwards. The case of typhus fever developed six hours after landing. All these cases had been disinfected and isolated on admission to hospital with the exception of three cases of measles which showed symptoms of the disease on admission, and another measles case who was too young to be separated from the mother.

"One birth occurred in the Western Division during the detention of passengers ex ss. *Empress of France*. No deaths were recorded at the station during the year.

"Besides urine examinations done at the hospital, the undermentioned chemical and bacteriological examinations were done at the laboratory:—

| | |
|---------------------------------------|-----|
| Swabs (nose and throat)..... | 10 |
| Sputum..... | 3 |
| Blood for enteric fever..... | 5 |
| Blood for typhus fever..... | 5 |
| Water (chemical analysis)..... | 13 |
| Water (bacteriological analysis)..... | 1 |
| Fæces..... | 2 |
| Total..... | 39" |

Lawlor's Island, Halifax, N.S. (Acting Quarantine Officer, Dr. Judson V. Graham).—"There was one death at the hospital during the year—a child being held for deportation at the Immigration building as a Mongol imbecile, developed chickenpox, was transferred to the quarantine hospital, where it died of septi-cæmia.

"A female passenger refusing vaccination, not having been previously vaccinated, was taken to the station to complete the detention required by the regulations, but after three days' detention, at her request, she was vaccinated and released.

"The ss. *Coronia* arrived here on July 21, reporting two cases of smallpox in the third-class. The first case was discovered by the ship's surgeon on July 16, with the rash well developed. The case and family, nine in all, were immediately isolated in the ship's hospital. The second case developed in the same family, July 20, the rash appearing July 21.

"The first-class passengers were permitted to proceed the same day and the third-class passengers destined to Canada, numbering 400, including the two sick cases, were disembarked into quarantine the following day, July 22. The delay in disembarking the third-class passengers was occasioned by the ship's agents requesting that the proposed action be submitted to Ottawa for confirmation before any passengers were disembarked into quarantine. On disembarking the passengers destined to Canada, the ship sailed for New York without being released from quarantine.

"The 398 passengers landed into quarantine were vaccinated on July 22 (among whom were four who had never been previously vaccinated), also the attendants which accompanied them. It was necessary to revaccinate fifty of these, the first vaccination not showing a satisfactory reaction. On appearance of immunity reactions or successful takes, the passengers were released from quarantine, with the exception of the sick and their immediate families.

"The ss. *Cedric* arrived at quarantine on March 8, the ship's doctor reporting that they had rejected three steerage passengers suffering from smallpox, at the time of embarkation at Liverpool. These three cases were picked up when crossing the gangway and were immediately isolated in one of the ship's hospitals until embarkation was completed, when they were put ashore again. The ship's surgeon took all necessary precautions on the voyage, vaccinating

all the steerage passengers with the exception of twenty-two who refused to submit to it. These twenty-two with four members of their families accompanying were landed into quarantine to complete the period of detention required under the regulations. However, on explaining to these passengers why the ship's surgeon wished to vaccinate them, they requested that it be done at this station, and were all vaccinated by me. They were released as soon as a satisfactory reaction showed or the required period of detention was completed.

"Including the passengers and attendants quarantined from the ss. *Caronia*, but exclusive of the quarantine staff and their families, there were 476 vaccinations performed at this station during the year, with the following results: Positive takes, 61; immunity reactions, 398. The remaining 17 left before the result could be determined.

"In accordance with the regulations, the entire quarantine staff and the members of their families resident at the station were vaccinated in February, with the exception of one child who was successfully vaccinated last year, and four who are protected by previously having had smallpox. The results showed as follows: Positive takes, 3; immunity reactions, 26."

William Head, Victoria, B.C. (Quarantine Officer, Dr. C. P. Brown).—"There were twenty-five sufferers from the Japanese earthquake disaster ex the ss. *President Jefferson* landed here September 15. They were all British. This station co-operated to the best of its ability in housing and caring for them. Mr. Skinner, of the Immigration Department, attended to them for that department, chiefly transportation. Mrs. Fleming arranged the Red Cross assistance especially in outfitting and securing them positions. Hon. Mr. Oliver, Premier of British Columbia, had Colonel Ross Napier visit them to arrange any assistance that could be extended from the province. Miss Williams, trained nurse, who assisted Mrs. Fleming, was very kind indeed, staying here constantly without pay. Three families remained in Canada. The last left the station on October 24.

"Buildings generally have all been in use this year. They have been found to be in fit condition for occupation and use and well suited to the needs. The routine repairs have been carried out by our own staff, with materials purchased by the Public Works Department. Some minor alterations have been made which have added to their efficiency, the most important being the installation of additional washing accommodation in the second-class detention building and the oriental steerage quarters. Some needed furniture has also been supplied.

"Major Quarantines: The epidemic of smallpox on the Asiatic coast has been severe and virulent. Five vessels, three passenger and two freighters, have brought smallpox. The procedure followed with these has been, to determine the location of the disease among the passengers and crew, and decide which classes of passengers and what part of the crew were to be regarded as sufficiently close contacts to warrant detention. Then inspect these and land those not having been successfully vaccinated within one year or having had smallpox. Next, inspect all the rest on board and vaccinate those who come under above category. Fumigate the quarters where the patient has been. As soon as the patients and detentions with stores and supplies are landed, release the vessel. This was followed with the *Empress of Australia* and *Asia* with a delay of about three and one-half hours each. The *Canada* had a larger passenger list and all the oriental steerage was landed to save delay. But it was found they could have been inspected on board as quickly. With the freighter *Capto* it was necessary to delay the vessel until sufficient of the crew were found immune by the vaccination reaction to operate the vessel. The *Kurdistan* had enough men vaccinated recently to allow the vessel to proceed with less than three hours' delay.

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"In this connection the department authorized the enforcing of Section 29 of the Regulations on vessels coming from San Pedro, Cal., as from January 31, 1924. As a consequence, two vessels arrived and were detained for vaccination. By the immune reaction it was possible to release them in twenty-four hours.

"Our difficulty in the quarantines referred to above has been to read accurately the results of the vaccinations carried out on board by the ships' surgeons. Their difficulty has been in enforcing the vaccination of all members of the crew, especially a large Chinese crew. They are overcoming this by careful records of vaccinations performed. We have tried to have them do the vaccinations in the approved intracutaneous way with control, and keep records accordingly. By doing this here we have been able to cut the period of detention short and lessen the number detained.

"In connection with the smallpox situation it should be reported that last September outbreaks of smallpox were occurring among the Indians of this coast, and the suspicion was that Indians returning from Washington State from hop-picking were bringing it with them. I consulted with Hon. Dr. Young, Provincial Officer of Health for British Columbia, and as a consequence our department had the immigration authorities segregate all returning Indians on landing from the coastwise boats for inspection by the immigration medical officer, and vaccinate if needed. Dr. Milne at Victoria did this from September 12 to November 23, vaccinating 271.

"Attention is also drawn to the number of vessels arriving with bills of health showing the presence of quarantinable disease. Smallpox was shown at San Pedro, San Francisco, Philadelphia, Rio de Janeiro, Algiers, Tokyo, Kobe, Shanghai, and Hongkong. Plague was shown at Singapore, Hongkong, Shanghai, Paita, Callao, Sourabaya. Typhus was shown at Algiers, Sourabaya and Samarang.

"An attempt was made this past winter season to lessen the delay occasioned vessels through waiting at the station for daylight. Vessels were accordingly inspected after sundown, freighters till 6 p.m., and passenger boats on providing approved lights and conditions until 9 p.m.; all vessels at 6 a.m. This has been found satisfactory so far as it goes. Roughly there were 123 vessels waited at the anchorage an average of six hours each during the year. Of course it is not meant by this that all of these vessels suffered financial drawback; many of them did not, in so far as they waited subsequently for berth or cargo.

"The total number of vessels inspected this year, 427, as compared with 285 last year, shows an increase of 50 per cent. The diversified nature of the traffic is shown by the nationality of the vessels, the British predominating with 46 per cent of the total:—

| | |
|-----------------|-----|
| British..... | 196 |
| Japanese..... | 111 |
| American..... | 69 |
| Norwegian..... | 26 |
| Danish..... | 10 |
| Dutch..... | 7 |
| Spanish..... | 3 |
| Italian..... | 2 |
| French..... | 1 |
| Nicaraguan..... | 1 |
| Panamanian..... | 1 |

"The wharves at the quarantine station have had constant supervision by Mr. Ford, District Engineer, Public Works Department. He has had extensive repairs carried out on both wharves, especially the small one. This was found in very bad condition and will need more extensive repairs as soon as possible.

The dolphin at the outer end of the big wharf was injured last December during the docking of the *Canada*. This has been the subject of special report and recommendation. Mr. Ford's staff have also kept supervision of the water system and assisted with such repairs as our own staff could not handle."

LEPER STATIONS

Leper stations or lazarettos in Canada are two in number, one at Tracadie, N.B., of which Dr. J. A. Langis is the superintendent, and one on the Pacific coast at Bentinck Island, B.C., in charge of Dr. C. P. Brown, the quarantine officer at William Head.

Lazaretto, Tracadie, N.B.—The number of patients in this institution at the close of the fiscal year was ten, viz., six males and four females, as compared with eleven at the close of the previous year, one patient having died on March 13, 1924, in the last stage of the disease. No new cases were admitted during the twelve-months period under review. The oldest inmate is age 78, and the youngest, 23. Seven are native of Tracadie, N.B., and surrounding country, all French Acadians; one Chinese, one of French and Scotch descent, and one Iclander. The following extract is from Dr. Langis' report:—

"Patients reported last year as arrested cases, with one exception, are enjoying the same good health and are contented. The last one to be admitted, October 6, 1922, is so much improved that we expect to return him to his family some time during next fiscal year.

"With our youngest patient we had to stop the intramuscular injections of the Dean Derivatives, 'H.I.', in November last, on account of leprosy fever, which has some similarity to hectic fever. This girl is decidedly ill and willing to remain in bed. We have in this case what some authors call papular leprosy, and according to their experience, though there is close resemblance to the original leprosy nodes, they are not real nodules, and are free of organism. We therefore, in this particular case, expect to resume the treatment with 'H.I.' as soon as this fever stops.

"My experience with Dr. Pomaret's arsenical preparation 'Eparseno' is not what I expected, after reading about its great value in the hands of Professor H. Gougerot, Dr. Pomaret and others. But I derive some consolation from what Professor Jeanselme, the President of the Third International Congress of Leprosy, held in Strasbourg in 1923, says: 'Results obtained by the use of Amino-Arseno-Phenol, "Eparseno," ought to be submitted to a severe test, and a longer experimentation is necessary before judging of the merit of this medicine.' The same gentleman has about the same observation through the use he made himself of the Ethyl Esters of Chaulmoogra Oil, and the poor results he had with four of his leper patients. My oldest patient after two years treatment with 'H.I.' had a relapse about ten months ago, and at my suggestion, accepted the arsenical compound, of which we had such laudable reports in the treatment of leprosy. The first injection, $\frac{1}{2}$ c.c., on the 2nd of October, was also given to another male patient, age 52 years, who though faring well on the 'H.I.' treatment, begged to be treated with 'Eparseno'. Instructions were strictly followed, but within two months, after 23 c.c. had been injected, the old man got worse. The other patient developed a good size gluteal abscess after the eighteenth injection and stopped taking it with no apparent results. Since February he resumed the 'H.I.' injections. This is my first experience with an abscess consequent to hypodermic, intravenous and intramuscular therapy to my leper patients in fifteen years.

"A director of the Investigation Station, United States Public Health Service, Kalihi Hospital, Honolulu, recently wrote: 'Leprosy is such a slow,

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chronic disease, so insidious and sluggish in its attack, and heretofore, at least, so stubbornly rebellious to therapy, that it taxes all the powers of patience and courage both in its victim and his medical attendant. Advantage has to be taken of every helpful measure for the maintenance of a steady, persistent and unflagging course of treatment which knows no faltering and no discouragement.' And also as Dr. Isadore Dyer, Dean of Tulene University, Louisiana, has aptly said: 'Above all things individualize the leper patient; watch for improvement. If it does not show in three months, wait a year and longer. Keep on driving at the treatment until the patient dies or gets well.' Since the Tracadie Lazaretto has had a resident physician, this in 1896, this practise has been followed. We have two men on parole, the first since 1898, and the other since 1912. Both are in the same good health as when they left the Institution. In our wards we presently have six arrested cases, who could go on parole if they were capable of looking after themselves; but they are all more or less impotent.

"I regard it a pleasant duty to express my gratitude to the staff of the lazaretto who have co-operated so diligently in the welfare of the lepers."

Lazaretto, Bentinck Island, B.C.—At the close of the fiscal year there were seven leper patients under treatment at this colony, viz., five Chinese, one Russian Jew, and one Doukhobor. These are classified by Dr. Brown as follows: Disease checked, four; active, but improving under treatment, two; commencing treatment, one.

During the year the lepers were transferred from D'Arcy Island to the new leper station at Bentinck Island, following its construction by the Department of Public Works. The new station is much more easily accessible from the Quarantine Station at William Head, being but three miles distant, whereas D'Arcy Island is thirty miles away. This ensures close oversight of the leper colony by the medical officers of the Quarantine Station.

Two new cases of leprosy were discovered in Western Canada during the year, and prompt arrangements were made for their removal to the lazaretto.

One Chinese patient who had spent several years under treatment at D'Arcy Island was released on parole on August 22, 1923, as free from leprosy infection, following his examination by a medical board consisting of Dr. C. P. Brown, medical superintendent of the Quarantine Station, Dr. H. E. Young, Provincial Officer of Health for British Columbia, Dr. F. F. Underhill, Medical Officer of Health for Vancouver, and Dr. R. L. Fraser, of Victoria. On returning for re-examination on March 29, 1924, Dr. Brown found a reappearance of symptoms which had previously disappeared, which led him to require the man's readmission for a further course of treatment.

Dr. Brown reports that the condition of both the new cases admitted during the year shows encouraging improvement under the treatment being administered, and concludes his report by an appreciative reference to the faithful service rendered during the year by the lazaretto staff.

(2) IMMIGRATION MEDICAL SERVICE

At the large ocean ports of Canada at which immigrants regularly arrive, there are stationed officers of the Immigration Medical Service whose business it is to medically inspect each and every newly-arriving immigrant, also other passengers of the non-immigrant classes referred to in section 2 of the Immigration Act, exclusive of returning Canadians. Those found mentally or physically defective to a marked degree are "certified" as prohibited of entry under one or other of the subsection of sections 3 of the Immigration Act, and they then pass under the jurisdiction of an officer of the Department of Immigration for disposal.

The Immigration medical officer's work consists of detecting persons who come within the following classes of prohibited immigrants as set out in the Immigration Act:—

- (1) Idiots, imbeciles, epileptics, feeble-minded or insane persons—Section 3 (a).
- (2) Persons affected with tuberculosis or other contagious or loathsome disease which is not curable within a reasonably short time—Section 3 (b).
- (3) Immigrants who are dumb, blind, or otherwise physically defective to a degree rendering them liable to become a public charge—Section 3 (c).
- (4) Persons of constitutional psychopathic inferiority—Section 3 (k).
- (5) Persons with chronic alcoholism—Section 3 (l).
- (6) Persons (other than those stated above) who are mentally or physically defective to such a degree as to affect their ability to earn a living—Section 3 (m).

Passengers, immigrant and non-immigrant, to the number of 138,241 were medically inspected at the Atlantic and Pacific ports of Canada during the fiscal year, which is an increase of 71,761 over the figures for the previous year. In addition, 8,169 persons bound to Canada via the ports of New York and Boston were medically inspected by officers of the United States Public Health Service.

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IMMIGRANTS AND NON-IMMIGRANTS MEDICALLY INSPECTED AT OCEAN PORTS

| Month | Quebec | | Halifax | | St. John | | Montreal | | Vancouver | | Victoria | | North Sydney | | Sydney | | New York and Boston | | Totals |
|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|--------------|----------------|------------|----------------|---------------------|----------------|---------|
| | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | Immigrants | Non-Immigrants | |
| 1923 24 | | | | | | | | | | | | | | | | | | | |
| April..... | 9,256 | 864 | 2,097 | 169 | 4,678 | 219 | 58 | 12 | 82 | 210 | 55 | 63 | 770 | 300 | ..... | 24 | 498 | 149 | 8,220 |
| May..... | 9,442 | 978 | 2,840 | 327 | 1,978 | 199 | 99 | 44 | 167 | 461 | 110 | 93 | 770 | 300 | ..... | 10 | 485 | 98 | 18,042 |
| June..... | 9,432 | 978 | 2,994 | 63 | 10 | 94 | 83 | 60 | 148 | 318 | 57 | 91 | 829 | 264 | ..... | 10 | 812 | 102 | 13,663 |
| July..... | 9,632 | 1,030 | 1,040 | 155 | 13 | 108 | 83 | 60 | 148 | 488 | 84 | 156 | 824 | 271 | ..... | 2 | 871 | 131 | 14,559 |
| August..... | 16,477 | 2,215 | 4,403 | 786 | 13 | 71 | 85 | 36 | 129 | 194 | 43 | 39 | 773 | 289 | ..... | 4 | 767 | 139 | 26,467 |
| September..... | 9,578 | 958 | 339 | 178 | 5 | 77 | 38 | 44 | 108 | 92 | 70 | 14 | 628 | 425 | ..... | 12 | 1,297 | 103 | 13,968 |
| October..... | 8,608 | 740 | 248 | 178 | 15 | 26 | 99 | 23 | 153 | 88 | 60 | 21 | 643 | 249 | ..... | 5 | 737 | 45 | 11,850 |
| November..... | 8,392 | 451 | 667 | 59 | 5 | 35 | 95 | 22 | 30 | 20 | 25 | 9 | 517 | 153 | ..... | 2 | 717 | 43 | 11,242 |
| December..... | ..... | ..... | 1,874 | 66 | 3,040 | 196 | ..... | ..... | 62 | 102 | 28 | 16 | 213 | 137 | ..... | 2 | 365 | 40 | 6,144 |
| January..... | ..... | ..... | 1,628 | 108 | 1,611 | 150 | ..... | ..... | 43 | 48 | 10 | 9 | 40 | 67 | ..... | 1 | 207 | 48 | 3,970 |
| February..... | ..... | ..... | 2,397 | 179 | 2,434 | 129 | ..... | ..... | 26 | 52 | 47 | 15 | 21 | 15 | ..... | ..... | 203 | 38 | 5,556 |
| March..... | ..... | ..... | 5,842 | 208 | 5,521 | 223 | ..... | ..... | 83 | 116 | 65 | 16 | 229 | 26 | ..... | 25 | 229 | 45 | 12,736 |
| Totals..... | 71,385 | 7,236 | 23,669 | 2,388 | 19,323 | 1,527 | 557 | 241 | 1,179 | 2,189 | 654 | 542 | 4,947 | 2,196 | 123 | 85 | 7,188 | 981 | 146,410 |

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The following table shows the number of persons medically certified:—

| | |
|--|-------|
| Section 3, subsection (a)—Mentally defective..... | 38 |
| Section 3, subsection (b)—Tuberculosis or loathsome disease..... | 49 |
| Section 3, subsections (c) and (m)—Physically defective..... | 1,278 |
| Section 3, subsection (k)—Constitutional psychopathic inferiority..... | 13 |
| Section 3, subsection (l)—Chronic alcoholism..... | 2 |
| Total certified..... | 1,380 |

Tables below show, by ports, the specific mental and physical diseases or defects for which these persons were certified.

IMMIGRANTS "CERTIFIED" BY MEDICAL OFFICERS UNDER SECTION 3 OF THE IMMIGRATION ACT.

SUBSECTIONS (a) AND (k)—MENTALLY DEFECTIVE

| Disability | Quebec | Halifax | St. John | Montreal | Victoria | North Sydney |
|--|--------|---------|----------|----------|----------|--------------|
| <i>Subsection (a)—</i> | | | | | | |
| Epileptics..... | 1 | 3 | 1 | 1 | | |
| Feeble-minded..... | 8 | 1 | 3 | | | |
| Idiots..... | | 1 | | | | 1 |
| Imbeciles..... | 1 | | 1 | | | |
| Insane..... | 9 | 2 | 1 | 2 | 1 | 1 |
| <i>Subsection (k)—</i> | | | | | | |
| Constitutional psychopathic inferiority..... | 7 | 5 | 1 | | | |
| Totals..... | 26 | 12 | 7 | 3 | 1 | 2 |

SUBSECTION (b)—PERSONS AFFLICTED WITH LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | Halifax | St. John | Montreal | Victoria | Vancouver |
|---------------------|--------|---------|----------|----------|----------|-----------|
| Gonorrhœa..... | 6 | 3 | | | 4 | |
| Psoriasis..... | 1 | | | | | |
| Ringworm..... | | 3 | 3 | | | |
| Sycosis barbae..... | | 2 | | | | |
| Syphilis..... | 1 | | | 1 | | |
| Trachoma..... | 8 | 1 | 2 | | 4 | 2 |
| Tuberculosis..... | 2 | 2 | 2 | 2 | | |
| Totals..... | 18 | 11 | 7 | 3 | 8 | 2 |

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SUBSECTIONS (c) AND (m)—PERSONS PHYSICALLY DEFECTIVE

| Defects | Quebec | Halifax | St. John | Montreal | Vancouver | North Sydney |
|-----------------------------------|--------|---------|----------|----------|-----------|--------------|
| Abscesses..... | 3 | | | | | |
| Absence of members..... | 60 | 21 | 43 | | | 1 |
| Alcoholism, chronic (ss. 1)..... | 2 | | | | | |
| Anæmia..... | 1 | 1 | | | | |
| Blindness, total or partial..... | 7 | 1 | | 1 | | |
| Blood vessels, defects of..... | 32 | 4 | 7 | 1 | | |
| Chest disorders..... | 5 | 5 | | | | |
| Chorea..... | 2 | | | | | |
| Deafness..... | 72 | 9 | 23 | 1 | | |
| Deaf and dumb..... | 8 | 2 | 6 | | | |
| Debility..... | 2 | 21 | | | | |
| Deformities..... | 35 | 23 | 15 | 1 | | 1 |
| Dermatites..... | 3 | | 3 | | | |
| Ear, diseases of..... | 3 | | 2 | | | |
| Enteroptosis..... | | | 1 | | | |
| Epileptiform seizures..... | 3 | | | | | |
| Eye, diseases of..... | 2 | | 2 | | | |
| Glandular conditions..... | | 1 | 5 | | | |
| Goitre..... | 3 | | 3 | | | |
| Gun shot wounds..... | | 7 | 10 | | | |
| Heart conditions..... | 57 | 1 | 15 | | | |
| Hernia..... | 32 | 12 | 15 | 2 | | |
| Hydrocele..... | 2 | 2 | 1 | | | |
| Jaundice, chronic..... | | 1 | | | | |
| Joints, diseases of..... | 3 | | 2 | 1 | | |
| Kidney conditions..... | 2 | 1 | | | | |
| Lack of physical development..... | 4 | 3 | | | | |
| Locomotor ataxia..... | 2 | | | | | |
| Loss of power of members..... | 215 | 15 | 92 | | | |
| Loss of tissue..... | | | 1 | | | |
| Malaria..... | 6 | | 1 | | | |
| Malignant growths..... | 1 | | | | | 1 |
| Nervous system, diseases of..... | 5 | 2 | 3 | | | |
| New growths..... | 1 | | | | | |
| Paralysis..... | 7 | 5 | 2 | 1 | | 1 |
| Poor physique..... | 3 | 1 | 4 | | | |
| Pregnancy, illegitimate..... | 7 | | | | | 1 |
| Rheumatism..... | 10 | 1 | | | | |
| Senility..... | 1 | 21 | 6 | | | |
| Speech, impediments of..... | 19 | 4 | 8 | | | |
| Stomach, diseases of..... | 1 | | | | | |
| Torticollis..... | 1 | 1 | | | | |
| Ulcer, chronic..... | | 1 | | | | |
| Uterine hemorrhage..... | | | | | 1 | |
| Vision, defects of..... | 144 | 6 | 57 | | 1 | |
| Totals..... | 766 | 172 | 327 | 8 | 2 | 5 |

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The following table shows the number of ocean passengers (immigrant and non-immigrant) who, on arrival in Canada, were detained for medical or surgical treatment:—

| Treated for | Quebec | Halifax | St. John | Montreal | Vancouver | Victoria |
|--------------------------|--------|---------|----------|----------|-----------|----------|
| Abscess..... | 4 | 5 | 2 | 1 | | |
| Anthrax..... | 1 | | | | | |
| Appendicitis..... | 1 | | | | | |
| Bronchitis..... | 5 | 4 | 3 | | 1 | |
| Cellulitis..... | 2 | 2 | | 2 | | |
| Chancroid..... | | | | | 1 | |
| Child-birth..... | 3 | | | | | |
| Cystitis..... | 1 | | | | | |
| Debility..... | | | 2 | | | |
| Dental periosteitis..... | 3 | | | | | |
| Digestive system..... | 1 | | *4 | | | |
| Dislocations..... | 1 | | | | | |
| Ear, diseases of..... | 1 | | 1 | | | |
| Eye, diseases of..... | 11 | 11 | 4 | | 8 | 7 |
| Fractures..... | 1 | 2 | 1 | | | |
| Gonorrhœa..... | | | | | | 4 |
| Gout..... | 1 | | | | | |
| Infected members..... | 4 | 2 | 5 | | | |
| Influenza..... | 1 | | 5 | | | |
| Injured members..... | 1 | | | | | |
| Jaundice..... | | 1 | | | | |
| Laryngitis..... | | 1 | 1 | | | |
| Miscarriage..... | | 1 | 2 | | | |
| Pneumonia..... | 4 | *3 | 1 | | | |
| Poisoning..... | | | †1 | | | |
| Pregnancy..... | | | 1 | | | |
| Pyrexia..... | | 2 | 8 | | | |
| Ringworm..... | 1 | 3 | | 2 | | |
| Scald..... | 1 | | | | | |
| Sinus..... | 1 | | | | | |
| Skin diseases..... | 30 | 14 | 22 | | 7 | 25 |
| Sprain..... | 3 | | 1 | | | |
| Synovitis..... | 1 | | | | | |
| Tonsillitis..... | 2 | 1 | 2 | | | |
| Trachoma..... | | | | 4 | | 4 |
| Tuberculosis..... | | | *2 | †1 | 1 | |
| Tumor..... | | | | | 1 | |
| Ulcer..... | 2 | 1 | | | | |
| Urinary system..... | | | †1 | | | |
| Varicella..... | 1 | | | | | |
| Wound..... | | 1 | 3 | | | |
| Totals..... | 88 | 54 | 72 | 10 | 19 | 40 |

†Died; *1 died.

Of the immigrant and non-immigrant ocean passengers detained for a closer medical examination than could be afforded during line inspection, on account of suspected mental or physical defects, the following number were respectively either recorded as having minor physical defects not sufficiently serious to bring them within the "prohibited classes" set out in Section 3 of the Immigration Act, or were released as "negative":—

| Port | Recorded and released | Released as negative |
|----------------|-----------------------|----------------------|
| Quebec..... | 756 | 53 |
| Halifax..... | 202 | 35 |
| St. John..... | 167 | 51 |
| Montreal..... | | 5 |
| Vancouver..... | | 1 |
| Totals..... | 1,125 | 145 |

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(3) MARINE HOSPITALS SERVICES

During the year 1923-24 the Department of Health operated two Marine Hospitals, namely at Sydney and Lunenburg in Nova Scotia. Sick mariners arriving at these ports and outports in the vicinity are therefore directed to these hospitals. At the larger ports where there are hospital facilities, sick mariners are treated at these hospitals at fixed contract rates. At some where there is occasional need for hospital treatment, the department arranges with some suitable private residence. At all other ports best arrangements are made under the authority and direction of the collectors of customs.

The following is a list of the hospitals under contract with this department:

NOVA SCOTIA

| | |
|-------------------|---|
| Amherst..... | Highland View Hospital |
| Antigonish..... | St. Martha's Hospital |
| Bridgewater..... | Dawson Memorial Hospital |
| Glace Bay..... | St. Joseph's Hospital |
| Halifax..... | Victoria General Hospital |
| | City Health Board (Contagious diseases) |
| | Tuberculosis Hospital |
| Kentville..... | Nova Scotia Sanatorium |
| Middleton..... | Soldiers' Memorial Hospital |
| New Glasgow..... | Aberdeen Hospital |
| North Sydney..... | Hamilton Memorial Hospital |
| Pictou..... | Pictou Memorial Hospital |
| Springhill..... | Springhill Cottage Hospital |
| Windsor..... | Payzant Memorial Hospital |
| Yarmouth..... | Yarmouth Hospital |

NEW BRUNSWICK

| | |
|------------------|--------------------------------|
| Bathurst..... | James H. Dunn Hospital |
| Campbellton..... | Hotel-Dieu Hospital |
| Chatham..... | Hotel Dieu |
| Moncton..... | Moncton Hospital |
| River Glade..... | Jordan Memorial Sanatorium |
| St. John..... | General Public Hospital |
| | County Hospital (T.B.C. cases) |
| St. Stephen..... | Chipman Memorial Hospital |
| Tracadie..... | Hotel-Dieu |

PRINCE EDWARD ISLAND

| | |
|--------------------|------------------------|
| Charlottetown..... | Charlottetown Hospital |
| | P.E.I. Hospital |
| Summerside..... | Prince County Hospital |

QUEBEC

| | |
|-------------------|---|
| Chicoutimi..... | Hotel-Dieu |
| Lake Edward..... | Lake Edward Sanatorium |
| Levis..... | Hotel-Dieu |
| Montreal..... | Montreal General Hospital |
| | Notre-Dame Hospital |
| | Hotel-Dieu |
| | Royal Victoria Hospital |
| | St. Paul's Hospital (Contagious diseases) |
| | Alexandra Hospital (Contagious diseases) |
| | Grace Dart Home (T.B.C. cases) |
| Quebec..... | Hotel-Dieu |
| | Jeffery-Hale's Hospital |
| | Civic Hospital (Contagious diseases) |
| | Laval Hospital (T.B.C. cases) |
| Sorel..... | Hôpital General |
| St. Jean..... | Hôpital St. Jean |
| Three Rivers..... | Hôpital St. Joseph |

BRITISH COLUMBIA

| | |
|----------------------|-----------------------------|
| Anyox..... | Anyox General Hospital |
| Chemainus..... | Chemainus General Hospital |
| Cumberland..... | Cumberland General Hospital |
| Ladysmith..... | Ladysmith General Hospital |
| Nanaimo..... | Nanaimo General Hospital |
| New Westminster..... | St. Mary's Hospital |
| Ocean Falls..... | Ocean Falls Hospital |
| Port Alberni..... | West Coast General Hospital |
| Powell River..... | St. Luke's Hospital |
| Prince Rupert..... | General Hospital |
| Tranquille..... | Tranquille Sanatorium |
| Vancouver..... | St. Paul's Hospital |
| Victoria..... | St. Joseph's Hospital |
| | Royal Jubilee Hospital |

Emergency hospitals were operated at the following ports:—

Nova Scotia.—Arichat, Canso, Liverpool, Lockport, Louisburg.

Prince Edward Island.—Souris.

Quebec.—Port Alfred.

It is gratifying to report that during the year there was no epidemic of contagious diseases; only a few isolated cases were reported. However, there has been a marked increase in the shipping activities during the year just ended, as instanced by the large increase in the amount of Sick Mariners' Dues collected. This increase was more especially noticeable at the ports of Halifax, Montreal, Vancouver and some other ports in the province of British Columbia. As a matter of fact, shipping was even greater than in pre-war years. Consequently, the Marine Hospitals Service had to deal with a larger number of sick, injured and distressed mariners than heretofore and the expenditure was proportionately increased.

During the past year the total number of sick, injured and distressed who were looked after by this Service was 2,745, as compared with 2,035 in the previous year, or an increase of 710. It is apropos to mention that as the amount voted by Parliament was insufficient to cover payment of the whole expenditure for the year, a considerable number of accounts had to be transferred to the year 1924-25 for payment. Had the parliamentary vote been sufficient to cover all the expenditure incurred during 1923-24, the total number of sick mariners would then have been 2,985.

Concerning the days of treatment in hospitals and private residences, they number 30,646, as compared with 32,679 in the previous year. Apparently there was a decrease in the number of days, but for the reason here above given, accounts covering treatment for 3,403 days were paid out of the year 1924-25. The correct number of days of hospital treatment given in the year was therefore 34,049, or an increase of 1,370 days on the previous year.

Very few changes were made in the personnel during 1923-24. The Marine Hospitals at Lunenburg and Sydney underwent certain necessary repairs and improvements, and were operated very satisfactorily. Readjustments were made in the salaries of some of the port physicians and also in the contract rates with the various hospitals. The policy of providing necessary and proper treatment to mariners suffering from incipient tuberculosis, which was initiated in the year 1922, was pursued during the year just ended, and the service has now complete and satisfactory arrangements for the treatment of such cases on both the Atlantic and Pacific coasts.

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Following are tabulated statements of the diseases and injuries for which mariners received treatment during the year:—

STATEMENT SHOWING DISEASES AND INJURIES FOR WHICH MARINERS RECEIVED TREATMENT DURING THE YEAR 1923-24

General Diseases—

505

| | |
|-----------------------|----|
| Measles..... | 6 |
| Diphtheria..... | 2 |
| Smallpox..... | 3 |
| Chickenpox..... | 1 |
| Scarlet fever..... | 3 |
| Typhoid fever..... | 20 |
| Paratyphoid..... | 3 |
| Erysipelas..... | 6 |
| Tuberculosis..... | 26 |
| Malaria..... | 8 |
| Syphilis..... | 93 |
| Gonorrhœa..... | 92 |
| Scabies..... | 11 |
| Toemia..... | 2 |
| Alcoholism..... | 1 |
| Diabetes..... | 4 |
| Rheumatism..... | 77 |
| Beri beri..... | 2 |
| Anaemia..... | 7 |
| New growths— | |
| Malignant..... | 6 |
| Non-malignant..... | 3 |
| Malformation..... | 4 |
| General debility..... | 14 |
| Cyst..... | 15 |
| Neurasthenia..... | 7 |
| Influenza..... | 87 |
| Parasites..... | 1 |
| Shock..... | 1 |

Local Diseases—

| | |
|---|----|
| Diseases of the Nervous System..... | 77 |
| 1. Of the nerves..... | 17 |
| Neuritis..... | 17 |
| 2. Of the Spinal cord and membranes..... | 3 |
| Degeneration of lateral column..... | 3 |
| 3. Of brain and membranes..... | 1 |
| Inflammation..... | 1 |
| 4. Functional and other nervous diseases..... | 56 |
| Paralysis..... | 1 |
| Hemiplegia..... | 4 |
| Epilepsy..... | 8 |
| Vertigo..... | 3 |
| Neuralgia..... | 21 |
| Congestion brain..... | 1 |
| Insomnia..... | 1 |
| Mania..... | 1 |
| Headache..... | 5 |
| Chorea..... | 2 |
| Hysteria..... | 2 |
| Psychosis..... | 2 |
| Ptomaine..... | 3 |
| Cerebral hemorrhage..... | 2 |
| Diseases of the eye..... | 46 |
| Conjunctivitis..... | 28 |
| Dacryocystitis..... | 1 |
| Ulcer cornea..... | 4 |
| Iritis..... | 9 |
| Galucoma..... | 2 |
| Trachoma..... | 1 |
| Cataract..... | 1 |
| Diseases of the ear..... | 43 |
| Cerumen..... | 11 |
| Otitis..... | 21 |
| Mastoiditis..... | 8 |
| Deafness..... | 3 |
| Diseases of the nose..... | 13 |
| Rhinitis..... | 4 |
| Abscess..... | 2 |
| Epistaxis..... | 2 |
| Coryza..... | 5 |

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STATEMENT SHOWING DISEASES AND INJURIES, &c.—Continued

| | | |
|--|----|-----|
| Circulatory system..... | | 26 |
| Valvular heart disease..... | 16 | |
| Endocarditis..... | 2 | |
| Myocarditis..... | 3 | |
| Tachycardia..... | 1 | |
| Arterio-sclerosis..... | 1 | |
| Oedema..... | 1 | |
| Phlebitis..... | 2 | |
| Respiratory system..... | | 206 |
| Bronchitis..... | 81 | |
| Tonsilitis..... | 66 | |
| Pneumonia..... | 10 | |
| Broncho-pneumonia..... | 3 | |
| Laryngitis..... | 5 | |
| Congestion lungs..... | 3 | |
| Hemorrhage lungs..... | 3 | |
| Pleurisy..... | 21 | |
| Asthma..... | 13 | |
| Abscess lungs..... | 1 | |
| Digestive system..... | | 457 |
| Dental caries..... | 84 | |
| Toothache..... | 3 | |
| Alveolar abscess..... | 1 | |
| Quinsy..... | 7 | |
| Pharyngitis..... | 3 | |
| Ulcer stomach..... | 2 | |
| Gastritis..... | 59 | |
| Indigestion..... | 40 | |
| Pyorrhoea..... | 5 | |
| Cancer stomach..... | 1 | |
| Hemorrhoids..... | 19 | |
| Fistula..... | 3 | |
| Appendicitis..... | 55 | |
| Colitis..... | 3 | |
| Jaundice..... | 6 | |
| Diarrhoea..... | 13 | |
| Hepatitis..... | 2 | |
| Hernia..... | 62 | |
| Constipation..... | 19 | |
| Dysentery..... | 6 | |
| Enteritis..... | 24 | |
| Dyspepsia..... | 14 | |
| Hepatic colic..... | 3 | |
| Intestinal colic..... | 7 | |
| Cholecystitis..... | 7 | |
| Ulcer duodenum..... | 9 | |
| Diseases of the lymphatic system..... | | 17 |
| Adenitis..... | 17 | |
| Diseases of the urinary system..... | | 45 |
| Nephritis..... | 14 | |
| Pyelitis..... | 4 | |
| Renal colic..... | 7 | |
| Cystitis..... | 16 | |
| Prostatitis..... | 2 | |
| Retention..... | 1 | |
| Enuresis..... | 1 | |
| Diseases of the generative system..... | | 94 |
| Urethritis..... | 14 | |
| Balanitis..... | 2 | |
| Stricture..... | 8 | |
| Phimosis..... | 4 | |
| Paraphimosis..... | 6 | |
| Chancroids..... | 12 | |
| Varicocele..... | 15 | |
| Hydrocele..... | 10 | |
| Orchitis..... | 12 | |
| Epididymitis..... | 11 | |

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STATEMENT SHOWING DISEASES AND INJURIES, &c.—*Continued*

| | | |
|---|-----|-----|
| Diseases of the organs of locomotion..... | | 95 |
| Sciatica..... | 4 | |
| Myalgia..... | 14 | |
| Lumbago..... | 34 | |
| Bursitis..... | 9 | |
| Sinusitis..... | 1 | |
| Periostitis..... | 1 | |
| Osteomyelitis..... | 2 | |
| Synovitis..... | 7 | |
| Arthritis..... | 20 | |
| Necrosis..... | 1 | |
| Tabes dorsalis..... | 2 | |
| Diseases of the connective tissues..... | | 206 |
| Cellulitis..... | 139 | |
| Abscess..... | 67 | |
| Diseases of the skin..... | | 137 |
| Carbuncle..... | 6 | |
| Boils..... | 40 | |
| Erythema..... | 5 | |
| Herpes..... | 3 | |
| Urticaria..... | 4 | |
| Dermatitis..... | 8 | |
| Whitlow..... | 5 | |
| Impetigo..... | 8 | |
| Ulcers..... | 23 | |
| Eczema..... | 23 | |
| Acne vulgaris..... | 5 | |
| Phlegmon..... | 7 | |
| <i>Injuries—</i> | | |
| General injuries..... | | 112 |
| Multiple injuries..... | 33 | |
| Burns and scalds..... | 79 | |
| Local injuries..... | | 666 |
| Injuries face..... | 14 | |
| Contusions..... | 56 | |
| Injuries finger..... | 42 | |
| Injuries hand..... | 55 | |
| Injuries shoulder..... | 6 | |
| Injuries upper extremities..... | 3 | |
| Injuries eyes..... | 10 | |
| Injuries thumb..... | 12 | |
| Injuries head..... | 32 | |
| Injured back..... | 13 | |
| Injuries ribs..... | 8 | |
| Injuries chest..... | 4 | |
| Fracture nose..... | 2 | |
| Dislocation thumb..... | 2 | |
| Fracture skull..... | 6 | |
| Fracture spine..... | 3 | |
| Concussion brain..... | 3 | |
| Fracture ribs..... | 19 | |
| Foreign body eyes..... | 22 | |
| Fracture jaw..... | 4 | |
| Fracture femur..... | 5 | |
| Fracture tibia and fibula..... | 5 | |
| Fracture tibia..... | 4 | |
| Fracture fibula..... | 1 | |
| Fracture patella..... | 2 | |
| Injuries lower extremities..... | 3 | |
| Fracture toes..... | 4 | |
| Fracture ankle..... | 1 | |
| Fracture fingers..... | 5 | |
| Fracture wrist..... | 1 | |
| Fracture clavicle..... | 4 | |
| Fracture hand..... | 6 | |
| Fracture foot..... | 4 | |
| Fracture arm..... | 14 | |
| Fracture scapula..... | 1 | |
| Injuries foot..... | 39 | |
| Flat foot..... | 3 | |
| Injuries abdomen..... | 2 | |
| Injuries back..... | 1 | |
| Injuries side..... | 9 | |

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STATEMENT SHOWING DISEASES AND INJURIES, &c.—*Concluded*Local injuries—*Continued*

| | |
|-------------------------|----|
| Injuries wrist..... | 2 |
| Injuries knee..... | 20 |
| Injuries arm..... | 9 |
| Injuries leg..... | 15 |
| Dislocated hand..... | 1 |
| Dislocated elbow..... | 2 |
| Dislocated finger..... | 1 |
| Sprained arm..... | 1 |
| Sprained side..... | 5 |
| Sprained back..... | 7 |
| Sprained leg..... | 1 |
| Sprained elbow..... | 2 |
| Sprained ankle..... | 27 |
| Sprained foot..... | 3 |
| Sprained wrist..... | 6 |
| Sprained knee..... | 5 |
| Sprained neck..... | 1 |
| Sunstroke..... | 1 |
| Frostbite..... | 1 |
| Fatigue..... | 1 |
| Gunshot wounds..... | 1 |
| Stab wounds..... | 1 |
| Malingering..... | 7 |
| Paronychia..... | 1 |
| No diagnosis..... | 52 |
| Observation..... | 39 |
| X-ray examinations..... | 24 |

Total number of seamen treated..... 2,745

(4) VENEREAL DISEASE CONTROL

The venereal disease campaign which was inaugurated in the year 1919 and which has been carried on successfully during the past four years was continued during the past fiscal year. The outstanding feature of the campaign is the free clinic for the treatment of the venereal diseases. During the past year there were fifty-six free venereal disease clinics in operation throughout the country distributed as follows:—

| | |
|-----------------------|----|
| Nova Scotia..... | 5 |
| New Brunswick..... | 8 |
| Quebec..... | 10 |
| Ontario..... | 17 |
| Manitoba..... | 4 |
| Saskatchewan..... | 6 |
| Alberta..... | 4 |
| British Columbia..... | 2 |

There are, in addition, a number of subsidiary clinics in women's hospitals, maternity hospitals, child welfare centres, children's hospitals, day nurseries, etc. Treatment is free for all. During the fiscal year there were under treatment in clinics:—

| | |
|---|---------|
| Total cases admitted to clinics..... | 12,526 |
| Total cases treated by physicians..... | 23,022 |
| Total treatments in clinics and institutions..... | 328,963 |
| Total laboratory examinations..... | 36,334 |
| Total Wassermann reactions..... | 20,932 |
| Total doses of Arsphenamine..... | 51,133 |

Treatment was continued in reformatories and jails throughout the country during the year. With the approval and assistance of General St. Pierre Hughes arrangements were made whereby all prisoners entering penitentiaries are given a Wassermann and smear, and treated if necessary

Venereal disease literature was distributed during the year as follows:—

Numerous lectures were given throughout the country which were largely attended. In our educational campaign during the year the American Social Hygiene films, "The Health Twins at Work," "Social Protective Measures," "Youth and Life," and "Keeping Fit" have been used. Our method of procedure is as follows: Through the co-operation of the Canadian Social Hygiene Council and the Dominion Department of Health, on Sunday night the most popular moving picture theatre in some town is engaged and the meeting advertised in the local newspapers and churches. The programme opens with "The Health Twins at Work," followed by "Social Protective Measures." A lecture is then given, dealing with various phases of social hygiene. As these lectures are for adults, a special effort is made to drive home to them the necessity for the education of boys and girls in the elemental principles of life as a preparation for their careers as citizens and parents. The provision of recreational facilities is stressed; the problem of prostitution and venereal disease, the relationship of immoderate and extravagant living and of excesses of various kinds to present day unhappiness are discussed. Following the lecture, some of the slides from the series "Youth and Life" and "Keeping Fit" are shown. This programme gives two hours of instruction in an entertaining way. We believe that in this way the representative people of the community are influenced to take a greater interest in the problem of boys and girls. At times the programme is given as outlined to women only, and, at other times, to men only. This gives us the opportunity of reaching these groups with special types of lectures.

The advisability of a medical certificate as a prerequisite of marriage was stressed at public meetings and by articles in various publications. Birth control propaganda was combated by means of lectures and magazine articles. Higher education as a preventive of prostitution and venereal disease was stressed. Education alone will do much to prevent prostitution but to this

should be added specific knowledge of life. The duty of the community to the boy and girl has been pointed out and communities urged to provide recreation facilities for the young as well as the necessity of removing harmful influences. Supervision of dance halls, pool-rooms, movies and other places of public amusement was repeatedly urged.

During the year the venereal disease grant was continued. Each province received the following amount of the grant for the year:—

| | |
|-----------------------|-------------|
| Nova Scotia..... | \$10,744 33 |
| New Brunswick..... | 6,710 35 |
| Quebec..... | 48,430 14 |
| Ontario..... | 60,171 83 |
| Manitoba..... | 8,930 75 |
| Saskatchewan..... | 15,537 16 |
| Alberta..... | 12,069 68 |
| British Columbia..... | 10,759 61 |

The Canadian Social Hygiene Council worked energetically throughout the year and have reached many thousands with lectures and exhibits. The provincial health authorities are to be congratulated on their activities during the year. There is no falling off in the number of treatments; the attendance at clinics is keeping up and the treatment in institutions is being constantly extended.

It is still very difficult to obtain statistics of value. A questionnaire sent to all physicians throughout the country was answered by approximately only one-fourth of the recipients. Out of 9,000 physicians who received the questionnaire only 2,577 replied. These reported 23,022 cases of venereal disease. Of the many venereal disease specialists in Toronto only two made returns. In Montreal only three or four of the many venereal disease specialists made returns. Well known gynecologists who are removing pus tubes constantly report no cases of gonorrhœa. One of the best known and busiest nerve specialists in Canada reports no syphilis. Well known consultants who see hundreds of patients annually report no venereal disease.

The only conclusion one can draw is that the returns are very inadequate and physicians are apathetic about reporting.

The progress made during the year is in the main satisfactory.

(5) HOUSING, WITH HOSPITALIZATION AND SANITATION

HOUSING

The total amounts loaned to the provinces since the enactment of the Order in Council, P.C. 2997, dated December 3, 1918, as of date March 31, 1924, were:—

| | |
|---------------------------|-----------------|
| Manitoba..... | \$ 1,975,000 00 |
| New Brunswick..... | 1,525,000 00 |
| Ontario..... | 9,350,000 00 |
| British Columbia..... | 1,701,500 00 |
| Quebec..... | 7,369,689 62 |
| Nova Scotia..... | 1,537,000 00 |
| Prince Edward Island..... | 50,000 00 |
| | <hr/> |
| | \$23,508,189 62 |

The total number of houses erected, 6,244.

The number of municipalities operating, 179.

A revote of four million dollars was approved by Parliament for fiscal year 1923-24 for the purpose of making loans to provinces to encourage the erection of dwelling houses on the terms and conditions set forth in the Order in Council of December 3, 1918, and amendments made thereto; the appropriation to be

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applied only to the Provincial Governments which had already made commitments to the municipalities, and to cease at the end of the fiscal year 1923-24.

The amount loaned by the Federal Government to the different provinces as of date March 31, 1924, under the housing appropriation of 1923-24 was \$3,174,783.46, and the unexpended amount of revote of 1923-24 as of date March 31, 1924, was \$825,216.54.

Marked activity in housing development is taking place in northern Ontario and increasing demands made for planning with due regard to community needs and not merely for separate unorganized individuals, realizing that the elements of a healthy existence will be lacking unless provision is generously made from the outset for a vigorous associative life.

The division at the request of the Royal Commission on Pensions submitted evidence on the question of housing for ex-service men. *Inter alia* the following commentary emphasized the condition obtaining when such evidence was added, i.e.:—

It is conceded by the housing directors of the various provinces that the acuteness of the housing situation has passed to a certain extent, but there is still a visibly expressed desire of the people to participate in home building if facilities are available, which desire, doubtless, has been actuated by the example set by those who have participated under the provisions of the housing schemes.

The vacancies which may have been noted in various cities have doubtless been caused by the desire for better living conditions as expressed in urban and rural localities, in preference to the crowded tenement and badly lighted and ventilated houses which obtain in many of the cities throughout the Dominion to-day.

As to the question of giving assistance to ex-service men in altering houses and, further, as to the expediency for such provision, it is to be noted that in the provinces of British Columbia and Manitoba such assistance has already been rendered under the provisions of the housing schemes, with excellent results.

From the correspondence which has been received by this department from time to time the ex-service men and others living in rural districts would seem to appear to have been at a disadvantage as compared with those living within the precincts of municipalities, towns or cities.

However, since the Federal Government, under the provisions of the General Project for Housing, provided that monies should be loaned to the Provincial Governments for housing purposes, the Provincial Governments to loan the said monies to housing societies, companies, or individual owners of lots, the onus would seem to rest entirely with the Provincial Governments as to the disposition or uses of the money made for housing in the particular provinces, subject only to the four conditions imposed by the Federal Government.

It is to be noted that the present cost of building houses for men who cannot pay more than \$25 a month is too great to permit of an adequate rent being obtained.

HOSPITALIZATION

The division has been consulted by hospital trustees, superintendents and others interested in community hospital work concerning principles, practise and planning, exhibiting a keen interest and desire for information on this subject. It is evident that there is an outstanding demand for such information and judging by the correspondence received the appreciation is manifold.

The hospitalization, incidental to the federal quarantine services, which has been considerably remodelled, is proving its efficacy. The hospitals at Rockhead, Halifax, N.S., and Savard Park, Que., which have been remodelled to conform with present day principles and practice it is anticipated will be the means of largely eliminating cross infection, the *bête noir* of physicians in the past.

Infectious diseases from the viewpoint of efficient planning in hospitalization are receiving very close attention by hospital trustees, consultants and the architectural profession throughout Canada. The division through intensive study of the subject has advised thereon, inculcating the latest principles in planning accepted by the medical profession.

Buildings of the new lazaretto, including leper huts, hospital, caretaker's residence and stores, at Bentinck Island, B.C., which takes the place of the former lazaretto at D'Arcy Island, B.C., have been completed, the medical officer reporting that both patients and personnel have become established in the new quarters.

The residences of the medical officers at the boarding of vessels' station at Father Point, Que., have been remodelled to meet the requirements of the service; the work being executed by the workmen attached to Grosse Isle Quarantine Station, Que.

SANITATION

The division was consulted by the Canadian National Parks Branch concerning the sanitation of residences at Jasper park.

The publications covering sewage disposal and water supplies have been eagerly sought throughout the Dominion, so much so that second editions have been issued.

From time to time the division has furnished technical and educational publications with material covering "Duties of Municipalities Concerning Water and Drainage Facilities," rural water supplies and sewage treatment and disposal.

The Biological Board of Canada consulted the division upon raw water filtration installations for lobster canning factories, and a complete scheme including raw water sedimentation, filter and storage tanks was prepared. This installation would be the means of considerably, if not entirely, eliminating the bacterial content of the water used in such industry.

Opportunity has been taken to acquire information and data upon refuse disposal and treatment of industrial wastes, both of which subjects have already been valuable for disseminating in various parts of the Dominion.

The Provincial Councils of Architectural Associations of the Dominion have sought advice upon the desirability of the preparation of building by-laws applicable to the whole of the provinces. It would appear that, generally, the city building by-laws are not applicable in rural districts and that building is practically carried on without any attempt to follow a code, thereby endangering the health of the people. The associations stated that in Great Britain the Ministry of Health was responsible for the preparation of a building code governing the building operations throughout the British Isles, and furthered their statement with a request that a similar code may be prepared by the Dominion authorities. It is appreciated that there are many difficulties in the way of consummation for such a proposition, which in the meantime is being considered by the Dominion Council of Health.

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HOUSING—STATEMENT SHOWING USE OF FEDERAL LOAN IN THE PROVINCES
(Compiled from Official Reports as of date March 31, 1924)

| Province | Amount payable on basis of 1911 census on \$25,000,000 basis | Additional amount payable on basis of \$31,250,000, including revote of \$9,550,080, 1922-23 | Amount actually borrowed from Federal Government | Amount advanced by Province | Number of houses built | Number of municipalities |
|------------------------|--|--|--|-----------------------------|------------------------|--------------------------|
| | \$ | \$ | \$ | \$ | | |
| Manitoba..... | 1,580,534 79 | 395,133 69 | 1,975,000 00 | 1,097,841 09 | 347 | 17 |
| New Brunswick..... | 1,220,710 53 | 305,177 63 | 1,525,000 00 | * | 360 | 15 |
| Ontario..... | 8,753,291 93 | 2,188,322 98 | 9,350,000 00 | 8,653,655 99 | 2,459 | 77 |
| British Columbia..... | 1,361,521 59 | 340,380 40 | 1,701,500 00 | 1,692,300 00 | 552 | 30 |
| Quebec..... | 6,949,255 01 | 1,737,313 75 | 7,369,689 62 | 7,369,689 62 | 2,099 | 28 |
| Nova Scotia..... | 1,707,931 14 | 426,982 79 | 1,537,000 00 | 1,537,460 00 | 392 | 11 |
| Saskatchewan..... | 1,708,257 23 | 427,064 31 | | | | |
| Prince Edward Island.. | 325,144 45 | 81,286 11 | 50,000 00 | 15,000 00 | 5 | 1 |
| Alberta..... | 1,299,714 03 | 324,928 51 | | | | |
| N.W.T..... | 64,110 99 | 16,027 75 | | | | |
| Yukon..... | 29,528 31 | 7,382 08 | | | | |
| Total..... | 25,000,000 00 | 6,250,000 00 | 23,508,189 62 | | 6,244 | 179 |

* Figures not available from Provincial Government.

(6) OPIUM AND NARCOTIC DRUGS

TABLE 1—Number of various licenses issued under the Opium and Narcotic Drug Act, during the year ended March 31, 1924

| | |
|--|-----|
| Import licenses..... | 191 |
| Export licenses..... | 51 |
| Wholesale druggists, licenses..... | 107 |
| Retail druggists, licenses to manufacture..... | 57 |

TABLE 2—Table showing amount of narcotics imported into Canada under the licensing system, which became effective in the latter part of the year 1919—during the fiscal years ended March 31, 1919-1924, inclusive.

| | Cocaine | *Morphine | Crude Opium |
|-----------|---------|-----------|-------------|
| | ozs. | ozs. | pounds |
| 1919..... | 12,333 | 30,087 | 34,262 |
| 1920..... | 6,968 | 28,198 | 13,626 |
| 1921..... | 3,310 | 12,124 | 2,953 |
| 1922..... | 2,952 | 8,774 | 1,700 |
| 1923..... | 3,330 | 10,998 | 1,373 |
| 1924..... | 1,561 | 7,092 | 845 |

*Morphine includes Diacetylmorphine (Heroin).

In addition to the amount of narcotics imported during the twelve months ended March 31, 1924, the following quantities of narcotics were disposed of by the Department of Health and the Department of Customs and Excise, to the trade:—

| | |
|---|------------|
| Cocaine..... | 707 ozs. |
| Morphine, including Diacetylmorphine..... | 2,661 ozs. |
| Crude Opium..... | 211 pounds |

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TABLE 3—Summary of Narcotics Exported from Canada during the fiscal year ended March 31, 1924.

| Drug | Destination | Quantity |
|---------------------|--------------------------|--------------|
| Cocaine..... | Newfoundland..... | 1,205 grains |
| "..... | Brazil..... | 333 " |
| "..... | British West Indies..... | 2,622 " |
| Morphine..... | Newfoundland..... | 7,700 " |
| "..... | Brazil..... | 2,779 " |
| "..... | British West Indies..... | 2,185 " |
| Codeine..... | Newfoundland..... | 629 " |
| "..... | Brazil..... | 5,760 " |
| "..... | British West Indies..... | 63 " |
| Heroin..... | Newfoundland..... | 1,727 " |
| "..... | Brazil..... | 3,600 " |
| Powdered opium..... | Newfoundland..... | 10,388 " |
| Tr. opii..... | Newfoundland..... | 4 pounds |
| "..... | British West Indies..... | 5 " |

In connection with the export of narcotics from Canada, it may be explained that most of these drugs are included in a mixture with other ingredients in tablet or pill form, etc., or in the form of tinctures, and are generally included with a general order for drugs of various kinds. The export of narcotics is controlled under license.

TABLE 4—Showing the number of prosecutions handled by the Royal Canadian Mounted Police on behalf of the Department of Health, during the fiscal year ended March 31, 1924.

| Province | Doctors | Druggists | Veterinary Surgeons | Illicit Dealers other than Chinamen | Chinamen |
|---|---------|-----------|---------------------|-------------------------------------|----------|
| British Columbia..... (not including Vancouver). | 1 | 1 | | 5 | 92 |
| Vancouver..... | | | | 6 | 25 |
| Alberta..... | 3 | | 1 | 3 | 14 |
| Saskatchewan..... | 2 | 2 | 1 | 7 | 6 |
| Manitoba..... | | | | 1 | 1 |
| Ontario (not including Toronto)..... | 4 | 2 | | 7 | 7 |
| Toronto..... | | | | 9 | 4 |
| Quebec (not including Montreal)..... | 1 | 2 | | 5 | 6 |
| Montreal..... | 4 | 2 | | 32 | 40 |
| New Brunswick..... | | | | 4 | 3 |
| Nova Scotia..... | | | | | |
| Prince Edward Island..... | | | | | |
| Totals..... | 15 | 9 | 2 | 79 | 198 |
| Total..... | | | | | 303 |

The above figures represent only federal prosecutions or those handled by the Royal Canadian Mounted Police, on behalf of the Department of Health, and do not include prosecutions handled by the municipal or provincial police.

Table 5 shows number of convictions for offences against the Opium and Narcotic Drug Act, for the judicial year ended September 30, 1923, furnished by the Dominion Bureau of Statistics.

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TABLE 5.—OFFENCES AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE YEAR ENDED SEPTEMBER 30, 1923.

| Province | Sentence | | | Place of Birth of Person Convicted. | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------------|------------------|--------------------------|-------------------------------------|---------|---------|----------|--------|---------------|-------|---------|--------|--------|---------|-------|---------|-----------|----------|--------|--------|-------------|-------|-------|---------|
| | Total convictions | Option of a fine | Committed without option | Deferred, etc. | Ireland | England | Scotland | Canada | United States | China | Holland | France | Greece | Assyria | Italy | Germany | Not given | Roumania | Poland | Russia | Scandinavia | India | Japan | Austria |
| Prince Edward Island..... | 6 | 6 | | | | | | | | | | | | | | | | | | | 6 | | | |
| New Brunswick..... | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| New South Wales..... | 488 | 175 | 295 | 18 | | 6 | 1 | 343 | 15 | 89 | 1 | 2 | 1 | 1 | 9 | | 13 | 1 | 1 | 5 | | | | |
| Quebec..... | 207 | 140 | 61 | 6 | 3 | 6 | 3 | 99 | 12 | 61 | 1 | 1 | 1 | 1 | 9 | | 12 | | | | | | | |
| Ontario..... | 21 | 11 | 9 | 1 | | 1 | | 14 | 4 | | | | | | | | | | | | | | | 1 |
| Manitoba..... | 40 | 25 | 15 | | 2 | | 1 | 10 | 4 | 22 | | | | | | | | | | | 1 | | | |
| Saskatchewan..... | 22 | 19 | 3 | | | 2 | 3 | 1 | 1 | 13 | | | | | | | 1 | | | 1 | 1 | | | 1 |
| Alberta..... | 315 | 167 | 139 | 9 | 4 | 7 | 4 | 38 | 16 | 232 | | 1 | 1 | | 2 | 2 | 5 | | 1 | | | | | |
| British Columbia..... | 1,102 | 546 | 522 | 34 | 9 | 22 | 12 | 505 | 52 | 420 | 1 | 4 | 2 | 3 | 20 | 2 | 31 | 1 | 2 | 6 | 8 | | 1 | 1 |

TABLE 5—OFFENCES AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE YEAR ENDED SEPTEMBER 30TH, 1923

| Province | Nature of Offence | | | | | | | | | | |
|---------------------------|--|------------------|---------|----------|-----------------------|------------------------------|---|-------------------------|-----------------------------------|---------------------------------|--------------------|
| | Breach of Opium and Drug Act | In Possession of | | | Smok- ing Opium | Selling Narcotic drugs | Giving and dis- tributing narcotic drugs | Keeping Opium den | Fre- quenting Opium dens | Impor- tation of drugs | Opium apparatus |
| | | Opium | Cocaine | Morphine |  |  |  |  |  |  |  | Drugs not specified |
| Prince Edward Island..... | 3 | | | | 5 | | | | | | |
| Nova Scotia..... | 12 | 1 | | | 11 | 1 | | | | | |
| New Brunswick..... | 1 | 21 | 3 | | 14 | 13 | 3 | 2 | 52 | 2 | |
| Quebec..... | 6 | 1 | 12 | 10 | 2 | | | | 7 | | |
| Manitoba..... | 11 | 6 | 3 | 4 | 2 | 9 | 4 | 1 | | | |
| Saskatchewan..... | 7 | 3 | 2 | 1 | 3 | 1 | | | | | 2 |
| Alberta..... | 38 | 22 | 54 | 51 | 31 | 14 | 7 | 5 | 76 | 3 | 5 |
| British Columbia..... | | | | | | | | | | | |
| Totals for Canada..... | 78 | 54 | 74 | 66 | 68 | 49 | 14 | 8 | 135 | 5 | 7 |

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TABLE 6—Showing the amount of narcotic drugs and opium smoking paraphernalia seized by the Police and Customs authorities during the calendar year 1923

| | |
|--|-------------------------|
| <i>Opium—</i> | |
| Crude opium..... | 93 lbs. 11 ozs. 71 grs. |
| Tins of opium..... | 579 |
| Opium seconds (Yenshee)..... | 13 lbs. |
| Jars of opium (Small)..... | 295 |
| *Decks of opium..... | 453 |
| <i>Morphine.</i> | |
| "Decks" of morphine..... | 232 ozs. 19 grs. |
| Tablets of morphine ($\frac{1}{4}$ grs. $\frac{1}{4}$ grs.)..... | 86 |
| Ampoules of morphine..... | 413 |
| | 1,728 |
| <i>Cocaine.</i> | |
| "Decks" of cocaine..... | 424 ozs. 333 grs. |
| Ampoules..... | 754 |
| | 576 |
| <i>Heroin (Diacetylmorphine).</i> | |
| "Decks" of heroin..... | 107 grs. |
| Tablets of heroin..... | 11 |
| Ampoules of heroin..... | 145 grs. |
| | 144 grs. |
| <i>Drugs (Miscellaneous) including morphine, heroin and cocaine—</i> | |
| 60 bottles containing..... | 292 ozs. 258 grs. |
| "Decks" of "drugs"..... | 1,714 |
| Tablets of "drugs"..... | 154 |
| <i>Cannabis Indica (Indian hemp)</i> | |
| | 46 ozs. |

*"Deck" is a small package containing 3 to 5 grains.

| | |
|-------------------------------|-----|
| <i>Paraphernalia—</i> | |
| Opium lamps..... | 172 |
| Opium smoking pipes..... | 161 |
| Opium scales..... | 44 |
| Pipe stems..... | 111 |
| Pipe connections (brass)..... | 99 |
| Ferrules (ivory)..... | 198 |
| Pipe heads..... | 54 |

TABLE 7—Showing number of aliens convicted of offences under the Act, deported from Canada as from June 28, 1922, to March 31, 1924

| | |
|-----------------------------|-----|
| Chinese..... | 107 |
| United States citizens..... | 44 |
| French..... | 2 |
| German..... | 2 |
| Greek..... | 2 |
| Italian..... | 2 |
| Irish..... | 1 |
| Philippino..... | 1 |
| Total..... | 161 |

Some time ago the department sent out a questionnaire to all registered practising physicians in Canada, numbering 8,300, to ascertain the number of persons requiring narcotics under the care of a doctor. Replies were received from 4,019 physicians, or 48.42 per cent. A summary of the replies received, as shown in the following table, may be of interest.

TABLE 8

| Province | Medical Cases | |
|---------------------------|---------------|--------|
| | Male | Female |
| Ontario..... | 163 | 140 |
| Quebec..... | 74 | 126 |
| Nova Scotia..... | 10 | 20 |
| New Brunswick..... | 10 | 18 |
| Manitoba..... | 28 | 20 |
| Saskatchewan..... | 27 | 25 |
| Alberta..... | 24 | 14 |
| British Columbia..... | 59 | 19 |
| Prince Edward Island..... | Nil | Nil |
| Totals..... | 395 | 382 |
| Grand Total..... | | 777 |

In connection with these figures it is of interest to note the results obtained by the authorities in the city of New York in connection with a somewhat similar questionnaire sent out to 14,715 physicians in the state of New York. Replies were received from 7,559 physicians, or a percentage of 51.37. These 7,559 physicians who replied had under their care or treatment, 775 persons who required narcotics.

The majority of the cases included in the returns furnished the department can be properly classified as medical cases, such as chronic neuritis, chronic neuralgia, chronic rheumatism, cancer, tumor, etc. A large number of them, however, were simply cases of straight drug addiction with no apparent organic trouble or, in other words, victims of the habit, relying on the physician to obtain their usual supply of their favourite drug.

At the time the questionnaire was sent out to members of the medical profession, information was collected from every reliable source—medical officers of health, chiefs of police, crown attorneys, magistrates and others who might be in a position to furnish information as to the number of drug habitues in their community. As a result of the information received, an approximate estimate of the number of drug addicts, other than those under medical care, was estimated to be as follows:—

TABLE 9

| | |
|---------------------------|--------------------|
| British Columbia..... | 2,250 drug addicts |
| Alberta..... | 370 " |
| Saskatchewan..... | 270 " |
| Manitoba..... | 500 " |
| Ontario..... | 1,800 " |
| Quebec..... | 3,800 " |
| Nova Scotia..... | 300 " |
| New Brunswick..... | 250 " |
| Prince Edward Island..... | Nil |
| Total..... | 9,500 drug addicts |

These figures, of course, are only approximate as it must be realized that it is practically impossible to obtain accurate figures as to the exact number of drug users in Canada, when it is borne in mind that the vast majority of these people obtain their supplies through the medium of the street trafficker or peddler.

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At the meeting of the Dominion Council of Health held in November, 1923, arrangements were made for this department to draw up a model law providing for the treatment, compulsory or voluntary, of all drug habitues and for the provision of suitable institutions at which to treat such cases. At this date, Alberta and Nova Scotia have passed such legislation and now have facilities for dealing with cases of drug addiction. The other provinces have agreed in principle to the provisions of the model law and also to take the necessary steps to submit the bill to their respective legislatures at the earliest opportunity.

During the year, the department has been in constant communication with the Secretary General of the League of Nations respecting narcotic matters, furnishing the League with much detailed information with regard to seizures of narcotic shipments, so that they might be traced to their source and proper action taken by the Governments concerned.

During the past three or four years, the Opium Committee of the League of Nations has been gathering information from all countries signatory to the International Opium Convention or members of the League of Nations as to the amount of opium and cocaine, etc., produced annually and the requirements of such drugs for legitimate medicinal or scientific purposes throughout the world, with a view to devising some practical way of limiting the production of opium and the coca leaf to meet the world's requirements for legitimate medicinal use. Sufficient information has been gathered by the League to determine approximately the amount of narcotics required for legitimate use and a conference has been called to meet at Geneva in November, 1924, to deal with this problem.

On the whole, conditions have improved during the past year due to closer co-operation among all interested authorities in Canada, more drastic laws, better enforcement and, to a large extent, through the co-operation of this department with the authorities of the United States and Great Britain in the way of exchanging information and photographs and finger prints of internationally known drug traffickers.

(7) PROPRIETARY OR PATENT MEDICINES

During the fiscal year ended March 31, 1924, 660 new medicines were registered under the Proprietary or Patent Medicine Act, and a total number of 5,528 licensed.

As it is now a general practice to require manufacturers to submit for inspection before placing their products on the market a sample of all labels, wrappers and literature used in connection therewith, the labels, cartons, wrappers and advertisements of fifty-nine firms were examined, and thirty-two of these were found satisfactory. The others were instructed to make the necessary modifications to meet requirements.

In the enforcement of this Act fifty-eight seizures were made, fifty-five of which were not maintained, the goods being released on assurance given by the manufacturer that, in future, requirements would be strictly conformed to. The medicines involved in the other three were confiscated and destroyed.

The registration numbers assigned forty preparations comprised of medicated wines and other alcoholic remedies suspected of being available for beverage purposes were cancelled, thus further reducing the number of such products licensed. The remaining ones will be further investigated.

A number of medicines which were examined at the departmental laboratory at the request of this branch were found to violate the terms of registration and in each case such penalizing action was taken as the circumstances warranted.

The Advisory Board approved the medication of sixty-five alcoholic preparations and rejected forty as insufficiently medicated. Other matters dealt with by this board were the establishment of rulings in the matter of drug combinations and the fixing of quantities for certain potent drugs.

An Order in Council was passed extending the time for the sale or disposal of all proprietary or patent medicines for internal use on the market bearing a registration number granted under the Act of 1908 and all external proprietary or patent medicines on the market which bear an external medicine stamp marked "Prior to Proprietary or Patent Medicine Act 1919," until the first day of January, 1925.

(8) CHILD WELFARE

The general work of the division has enlarged during the year.

CO-OPERATION WITH OTHER DEPARTMENTS AND DIVISIONS

Some progress has been made in the matters noted:—

Department of Immigration.—(a) Women's Division: Conference and correspondence with the supervisor in regard to the welfare, comfort and safety of women and children; equipment and furnishing of nursery and waiting-rooms at the ports; deportations and other matters. In co-operation with the supervisor, special attention has been given to young women who have recently immigrated to enter home service or to be married and make their homes in Canada.

(b) Juvenile Immigration Division: Conference with minister, the deputy minister and the supervisor.

Department of the Interior.—Northwest Territories and the Yukon: Conferences have taken place with persons who formerly lived in this part of Canada, *re* general child welfare and maternal welfare there.

Department of Agriculture.—Dairy Branch: Numerous conferences *re* milk and publications on this subject.

Health of Animals Branch: Conferences arising out of requests made for information *re* bovine tuberculosis.

Department of Indian Affairs.—Conferences *re* Field Matrons, education of Indian Children, "The Little Blue Books" and other publications.

Department of Soldiers' Civil Re-establishment.—Conferences *re* diet in hospitals and other matters.

The Soldiers Settlement Board, Home Branch.—Conference *re* Outpost Homes and also *re* publications especially "The Supplement to The Canadian Mother's Book."

The Department of Trade and Commerce.—(a) Bureau of Statistics: Conferences and correspondence *re* Vital Statistics including births, infant mortality, maternal mortality and comparable statistics from other countries.

(b) Canadian Government Motion Picture Bureau: Correspondence *re* films, motion pictures, photographs and other matters.

Department of Mines.—Conferences, by request, with officials *re* matters specially affecting the health of women.

Department of Justice.—A number of conferences have taken place with the Inspector of Penitentiaries about boys who are presently confined in penitentiaries.

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CO-OPERATION WITH PROVINCIAL AUTHORITIES

By special invitation, visits have been made during the year to the following provinces: New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, British Columbia.

Special conferences and correspondence have taken place re the following. Provincial organization for child welfare, maternal welfare and public health nursing. Minimum wage. Children needing special care on account of not being in their own homes, or because of mental or physical disability and defect. Children of unmarried parents. Hospitals. Mothers' allowances.

CO-OPERATION WITH VOLUNTARY SOCIETIES

Many opportunities have occurred throughout the year for co-operation with societies which are provincially organized, and with others which have a Dominion-wide organization. Among these may be mentioned the Canadian Council of Child Welfare, the Canadian Association of Child Protection Officers, the Women's Institutes, Dominion and provincial, the Homemakers' Clubs, the Women's Section of the Grain Growers' Association, the United Farm Women, the Victorian Order of Nurses, the National Council of Women, the Imperial Order of the Daughters of the Empire, the Canadian Red Cross, the Association of Maternal Assistance, the Association of the Goutte de Lait, Fédération Nationale Saint-Jean-Baptiste and the Fédération des Femmes Canadiennes-Françaises.

PUBLICATIONS (CHILD WELFARE)

The demand for publications has increased during the year, but every effort has been made to conserve the supply by sending less than the number requested and by making inquiries before sending, in order to make sure that distribution would be careful and satisfactory. In most instances, publications are sent out singly and on personal request only.

New Publications.—No new publications have been published during the year but four new series have been outlined and a good deal of material, which has been gathered for some years past, has been reread, revised and arranged in order under the above-mentioned outlines.

The Little Blue Books.—The New and Revised Edition of "The Canadian Mother's Book" was published in English in May, 1923, and in French in November, 1923. The New and Revised English Editions of the other "Little Blue Books"—publications 3-16—appeared at varying intervals during the year, the last being published on February 5, 1924. The French editions are in preparation.

Supplement to the Canadian Mother's Book.—The "Supplement to the Canadian Mother's Book," which is for distribution by doctors and nurses only and is intended for use in Outpost Homes, has apparently been found useful and satisfactory for the purpose for which it was intended. The proof edition of 1,000 copies was issued September 3, 1923, and was sent to a number of doctors and nurses, also to some others who had special knowledge of Outpost Homes. A good many suggestions and improvements were thus received, which were embodied in the revised edition published February 11, 1924.

The Handbook of Child Welfare Work in Canada.—The "Handbook of Child Welfare Work in Canada" is now out of print. The demand exceeded the supply early in the present year.

Age—Height—Weight.—These statistics have been completed and tabulated. They were published during the year by the Department of Health of

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Toronto, in co-operation with the Dominion Bureau of Statistics and with this division. The same statistics have also appeared in the New Edition of "The Little Blue Books" and it is expected they will be of practical use.

OUTPOST HOMES

More interest is being taken in this subject, and we have had more letters from these homes. Much remains to be done.

CHILDREN NEEDING SPECIAL CARE

A good deal of time has been given to this subject, chiefly in conference with parents and teachers. Except in one or two centres, the work of organization proceeds slowly and the needs of these children are great.

HOME SERVICE

Conferences and correspondence with the Overseas Settlement Committee and others have advanced this important matter a little.

Steps have been taken by the Department of Health in one of our largest cities to train and register women who are willing to take up this work in co-operation with the other work of the department.

SCHOOL JOURNEYS

Conferences on this subject have been held, and it seems probable that before long this plan may be tried in some simple way.

CHILD INSURANCE

Anxiety was expressed by certain persons in regard to the above subject, and reliable information seemed to be needed. The result of enquiries into two cases cited and of conferences and correspondence with the Dominion and the Provincial Inspector of Insurance, respectively, and the heads or medical directors of three insurance companies showed that there were no grounds for such anxiety.

INFANT MORTALITY AND MATERNAL MORTALITY

This is the best index we have, not only to child welfare, but to general welfare and civilization. The publication, for the first time, of National Canadian Statistics of Infant and Maternal Mortality was made in the "Handbook of Child Welfare Work in Canada" on March 27, 1923, as for the year 1921. Some attention has thus been aroused and frequent references have been made to these figures during the year. The figures for the following year, 1922, are now available and show little or no improvement. They are as follows:—

| | |
|---|--------|
| Total number of infants dying under one year old..... | 25,553 |
| Total number of mothers dying in child-birth..... | 1,248 |
| Number of infant deaths per 1,000 births..... | 101 |
| Number of mothers' deaths per 1,000 births..... | 5 |

In other words, we lose over 73 lives of mothers and children every day, and over 514 every week.*

Infant mortality in Canada is more than twice as high as in New Zealand. Maternal mortality in Canada is nearly twice as high as in England and Wales.

* Statistics obtained from the Dominion Bureau of Statistics on request. Quebec figures are reported from provincial records only.

(9) FOOD AND DRUGS DIVISION

During the year ended March 31, 1924, the activities of this division have been carried on with the purpose of maintaining the quality of food and drugs as sold to the people of Canada. Samples of many articles were procured and analyzed. In all cases where it was found that inferior goods were on the market, effort was made to remove the cause of the difficulty by correction at the source. Wilful and persistent offenders were summoned to court and the final results have proven that this procedure was justified.

Control of importations of food is one of our best protections, because it is much better policy to stop defective goods at the ports of entry than to try to control the sale after they have passed through the regular channels of trade.

In addition to the general routine work in connection with suspected articles, several systematic collections were made, including the following foods and drugs: honey, butter, caramels, peanut butter, salt, coffee, vinegar, lard, chloride of lime, disinfectants, hydrogen peroxide, rhubarb, senna leaves, epsom salts, fluid extract of cascara, fluid extract of senna, liquor arsenicalis, mercury ointment, zinc ointment, paregoric, tincture of iodine and tincture of gentian. The general condition of the supply of these articles is regarded as satisfactory, although retailers do not always take the necessary trouble to store unstable articles so as to prevent decomposition and there is apparent lack of care in manufacture of such preparations as liquor arsenicalis, and tincture of iodine.

In the laboratories operating at Ottawa, Halifax, Montreal, Winnipeg, and Vancouver analyses were made of 6,274 samples, as detailed in the following tabulated summary:—

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED

OTTAWA

| | | | |
|--------------------------------|-----|------------------------------|-----|
| Aledine..... | 1 | Disinfectants..... | 27 |
| Ammonia, aromatic spirits..... | 4 | Dried fruits..... | 20 |
| Antiseptic..... | 1 | Drugs (misc.)..... | 65 |
| Arex, compound..... | 1 | Drugs (narcotic)..... | 131 |
| Asperin..... | 4 | Dubbing..... | 2 |
| Baking powder..... | 22 | Duko..... | 1 |
| Beans..... | 23 | Dyes..... | 5 |
| Beverages..... | 6 | Eggs..... | 2 |
| Bleaching powder..... | 12 | Egg albumen..... | 17 |
| Bologna sausage..... | 2 | Egg flakes..... | 1 |
| Boric acid..... | 1 | Egg yoke..... | 4 |
| Boric ointment..... | 8 | Elixir lact. pepsin..... | 1 |
| Borax and honey..... | 1 | Epsom salts..... | 32 |
| Brosemeal..... | 1 | Essence of peppermint..... | 6 |
| Butter..... | 109 | Evaporated milk..... | 1 |
| Camphor, liniment..... | 1 | Fats..... | 2 |
| Camphor, spirits of..... | 4 | Feeds..... | 13 |
| Camphorated oil..... | 23 | Fertilizers..... | 25 |
| Candy..... | 10 | Figs..... | 5 |
| Candy (caramel)..... | 96 | Fish..... | 4 |
| Canned apples..... | 2 | Flavouring extracts..... | 8 |
| Canned beef..... | 1 | Fluids (washing)..... | 1 |
| Canned herring..... | 1 | Flour..... | 5 |
| Carbon tetrachloride..... | 7 | Fluid extract cascara..... | 21 |
| Chocolates..... | 5 | Fluid extract senna..... | 14 |
| Cherries..... | 1 | Gasoline..... | 2 |
| Cider..... | 1 | Gelatine (leaf)..... | 2 |
| Cloves (whole)..... | 1 | Gelatine (powdered)..... | 28 |
| Cloves (ground)..... | 2 | Gentian..... | 6 |
| Cocoa and cocoa products..... | 21 | Ginger..... | 2 |
| Cocanut..... | 2 | Ginger wine concentrate..... | 4 |
| Coffee..... | 58 | Grape juice..... | 1 |
| Confection powder..... | 2 | Hamburg steak..... | 8 |
| Corn..... | 2 | Honey..... | 44 |
| Cream of tartar..... | 2 | Horseradish..... | 1 |
| Cream of wheat..... | 1 | Hops..... | 3 |
| Custard powder..... | 4 | Hydrogen peroxide..... | 103 |
| Dates..... | 1 | Icing sugar..... | 9 |

OTTAWA—Concluded

| | | | |
|-------------------------------|----|------------------------------|-------|
| Infant food..... | 61 | Peppermint extract..... | 1 |
| Insecticide powder..... | 1 | Peppermint, spirits of..... | 3 |
| Iodine..... | 6 | Peppermint, oil of..... | 1 |
| Jam..... | 66 | Pickles..... | 1 |
| Lard..... | 99 | Poison (rat)..... | 1 |
| Lemonade..... | 1 | Pork..... | 1 |
| Lemon extract..... | 2 | Pork and beans..... | 1 |
| Lemon juice..... | 1 | Preservatives..... | 1 |
| Lime water..... | 11 | Preservaline..... | 1 |
| Lime water tablets..... | 1 | Prunes..... | 1 |
| Liquor arsenicalis..... | 51 | Rhubarb root..... | 9 |
| Luputon..... | 1 | Salt..... | 22 |
| Maple butter..... | 2 | Sausages..... | 34 |
| Maple sugar..... | 8 | Seidlitz powders..... | 5 |
| Maple syrup..... | 50 | Senna leaves..... | 9 |
| Marmalade..... | 6 | Shortening..... | 1 |
| Medicines (cattle)..... | 1 | Soap (Castile)..... | 3 |
| Medicines, prepared..... | 6 | Soap (miscellaneous)..... | 41 |
| Medicines, miscellaneous..... | 10 | Strawberries..... | 12 |
| Milk and malt foods..... | 4 | Sugar (sucre de table)..... | 1 |
| Mineral oil..... | 3 | Sugar (cane)..... | 2 |
| Mineral water..... | 1 | Sugar (miscellaneous)..... | 3 |
| Mustard..... | 2 | Syrup (corn)..... | 1 |
| Nitre (spirits of)..... | 5 | Syrup (golden)..... | 2 |
| Nutmegs..... | 8 | Syrup (sugar)..... | 2 |
| Oil (cylinder)..... | 2 | Syrup (table)..... | 13 |
| Oil (linseed)..... | 1 | Tablets (miscellaneous)..... | 1 |
| Oil (lubricating)..... | 19 | Tea..... | 5 |
| Oil (olive)..... | 5 | Tomato paste..... | 4 |
| Oil, Rangoon..... | 1 | Turpentine..... | 2 |
| Oil, sweet..... | 7 | Vanilla extract..... | 4 |
| Ointment..... | 1 | Varnishes..... | 4 |
| Orange peel..... | 1 | Vinegar..... | 56 |
| Orange preparation..... | 5 | Walnuts..... | 2 |
| Paint..... | 24 | Water..... | 8 |
| Paragoric..... | 1 | Wine..... | 6 |
| Peanuts..... | 1 | Wine (tonic)..... | 37 |
| Peanut butter..... | 18 | Wine (medicated)..... | 16 |
| Pepper..... | 27 | | |
| Pepper shells..... | 4 | Total..... | 1,913 |

Samples of soap, lubricating oil, paints and varnish were examined for the Department of National Defence. Analyses of fertilizer were made for the Department of Agriculture.

HALIFAX

Samples Analyzed

| | | | |
|-----------------------------------|----|-------------------------------------|-----|
| Ammonia solution..... | 17 | Pepper..... | 20 |
| Ammonia, aromatic spirits of..... | 18 | Salad oil..... | 2 |
| Allspice..... | 6 | Sausages..... | 2 |
| Baking powder..... | 20 | Sugar, icing..... | 10 |
| Cassia and cinnamon..... | 5 | Sugar, maple..... | 12 |
| Camphor, spirits of..... | 1 | Sweet spirits nitre..... | 12 |
| Camphorated oil..... | 1 | Tea..... | 2 |
| Chlorinated lime..... | 15 | Vinegar..... | 16 |
| Cider..... | 1 | Water, bottled..... | 9 |
| Cloves..... | 6 | | 458 |
| Coffee..... | 13 | Samples of Importations Examined | |
| Confectionery..... | 11 | Beans..... | 8 |
| Cream of tartar..... | 1 | Cassia and cinnamon, whole..... | 11 |
| Flavouring extract, lemon..... | 28 | Cassia buds..... | 1 |
| “ peppermint..... | 16 | Chinese medicine..... | 2 |
| “ vanilla..... | 28 | Cloves, whole..... | 9 |
| “ wintergreen..... | 9 | Clove stems..... | 1 |
| Fruit, dried and packaged..... | 32 | Cocoa beans..... | 2 |
| Gelatine..... | 10 | Cocoa powder..... | 2 |
| Ginger..... | 9 | Fruit, dried..... | 17 |
| Gum benzoin..... | 2 | Ginger, whole..... | 12 |
| Honey..... | 2 | Lobsters, canned..... | 3 |
| Hydrogen peroxide..... | 11 | Mace, whole..... | 4 |
| Iodine, tincture..... | 33 | Molasses..... | 1 |
| Jams..... | 8 | Mustard seed..... | 5 |
| Lard, shortening..... | 19 | Mustard bran..... | 1 |
| Liquor arsenicalis..... | 20 | Mustard, ground..... | 1 |
| Lime water..... | 25 | Mustard compound..... | 1 |
| Marmalade..... | 6 | Nuts, Brazil, walnuts, almonds..... | 20 |

SESSIONAL PAPER No. 19

HALIFAX—Concluded

Samples of Importations Examined—Continued

| | |
|---------------------|----|
| Nutmegs..... | 34 |
| Paprika..... | 1 |
| Peas..... | 1 |
| Pepper..... | 10 |
| Pimento..... | 1 |
| Poland water..... | 1 |
| Preservatives..... | 4 |
| Salmon, canned..... | 1 |
| Seasoning..... | 2 |
| Sugar..... | 4 |
| Turpentine..... | 1 |

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Special Samples—for other Departments, etc.

| | |
|-------------------------------|-----|
| Beer or wash..... | 1 |
| Butter..... | 2 |
| Cream..... | 3 |
| Creosoted timber and oil..... | 2 |
| Fertilizers..... | 2 |
| Milk..... | 7 |
| Opium (suspected)..... | 1 |
| Water..... | 4 |
| Total samples examined..... | 641 |

MONTREAL

| | |
|---------------------------------------|-----|
| Allspice..... | 1 |
| Bacon..... | 2 |
| Baking powder..... | 24 |
| Bleaching powder..... | 26 |
| Boric acid ointment..... | 14 |
| Butter..... | 103 |
| Camphor..... | 3 |
| Camphor, spirits of..... | 23 |
| Camphorated oil..... | 23 |
| Caramels..... | 49 |
| Carbolic acid ointment..... | 12 |
| Castor oil..... | 12 |
| Cheese..... | 2 |
| Cloves..... | 11 |
| Coconut oil..... | 1 |
| Coffee..... | 39 |
| Coffee substitutes..... | 4 |
| Corn (canned)..... | 11 |
| Corned beef..... | 1 |
| Cream..... | 4 |
| Cream sugar..... | 1 |
| Cream of tartar..... | 10 |
| Cream of tartar substitute..... | 1 |
| Dried fruit..... | 7 |
| Formalin..... | 3 |
| Fowler's solution..... | 9 |
| Gauvin's aniseed syrup..... | 1 |
| Gin..... | 1 |
| Ginger..... | 11 |
| Ginger, essence of..... | 1 |
| Glycerin..... | 13 |
| Glycerin of boric acid..... | 8 |
| Ham..... | 2 |
| Headache wafers and tablets..... | 11 |
| Honey..... | 13 |
| Hydrogen peroxide..... | 30 |
| Icing sugar..... | 8 |
| Iodoform ointment..... | 9 |
| Jam..... | 8 |
| Lard..... | 19 |
| Lemon extract..... | 7 |
| Lime water..... | 11 |
| Lime water tablets..... | 6 |
| Maple essence..... | 2 |
| Maple sugar..... | 19 |
| Maple syrup..... | 18 |
| Mercuric iodide ointment..... | 3 |
| Mercuric oxide (yellow) ointment..... | 6 |
| Mercury ointment (blue ointment)..... | 7 |
| Milk..... | 8 |
| Mineral water..... | 36 |
| Molasses..... | 16 |
| Mustard..... | 7 |
| Orangeade..... | 1 |
| Orange crush..... | 1 |
| Oil—Olive..... | 6 |
| Oil—Salad..... | 3 |

| | |
|-----------------------------------|-----|
| Oil—Sweet (oil of almonds)..... | 1 |
| Paregoric..... | 8 |
| Peas, canned (imported)..... | 9 |
| Pepper—White..... | 19 |
| Pepper—Black..... | 6 |
| Peppermint creams..... | 1 |
| Peppermint extract..... | 1 |
| Pills..... | 1 |
| Sausages..... | 14 |
| Scidnitz powders..... | 27 |
| Sulphur ointment..... | 11 |
| Sweet spirits of nitre..... | 6 |
| Syrup ("Home Brand")..... | 1 |
| Table sugar..... | 3 |
| Table syrup..... | 3 |
| Tincture of benzoin compound..... | 1 |
| Tincture of gentian compound..... | 15 |
| Tincture of ginger..... | 10 |
| Tincture of iodine..... | 21 |
| Tincture of iodine, strong..... | 15 |
| Tincture of orange..... | 4 |
| Tonic wine..... | 7 |
| Vanilla extract..... | 9 |
| Vichy lemonade..... | 5 |
| Vichy water..... | 1 |
| Vinegar— | 6 |
| Cider..... | 17 |
| Malt..... | 13 |
| White wine..... | 6 |
| Yeast-Co..... | 1 |
| Zinc ointment..... | 21 |
| | 951 |

Samples from Importations

| | |
|---------------------------|----|
| Almonds..... | 1 |
| Apricots (dried)..... | 8 |
| Beans..... | 1 |
| Cane sugar..... | 1 |
| Clove stems..... | 1 |
| Fresco flavor..... | 1 |
| Herring..... | 1 |
| Maple essence..... | 1 |
| Molasses..... | 1 |
| Narcotic (suspected)..... | 1 |
| Olives (black)..... | 10 |
| Olive oil..... | 3 |
| Peaches (dried)..... | 8 |
| Pears (dried)..... | 6 |
| Preservaline..... | 1 |
| Prunes..... | 1 |
| Raisins..... | 4 |
| Snails..... | 1 |
| Tomato paste..... | 5 |
| Walnuts..... | 3 |

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MONTREAL—Concluded

Samples from importations—Continued

Samples submitted by R.C.M.P.

| | |
|-------------------|-------|
| Medicine..... | 1 |
| Narcotics..... | 118 |
| Rami-Gouttes..... | 1 |
| Snuff..... | 1 |
| | <hr/> |
| | 121 |

Samples from the Department of Agriculture

| | |
|------------------|-------|
| Butter..... | 125 |
| Cheese..... | 2 |
| Cream..... | 3 |
| Fertilizers..... | 14 |
| | <hr/> |
| | 144 |

Special Samples

| | |
|------------------------------------|-------|
| Alum powder..... | 1 |
| Baking powder..... | 39 |
| Camphor, spirits of..... | 1 |
| Exhibits from excise officers..... | 3 |
| Feed..... | 1 |
| Narcotic..... | 1 |
| | <hr/> |
| | 46 |

Recapitulation

| | |
|------------------------------------|-------|
| Departmental inspectors..... | 951 |
| Importations..... | 59 |
| Royal Canadian Mounted Police..... | 121 |
| Department of Agriculture..... | 144 |
| Special..... | 46 |
| | <hr/> |
| Total..... | 1,321 |

WINNIPEG

| | |
|--|----|
| Allspice, ground..... | 3 |
| Almond extract..... | 1 |
| Aprol (oil of Persica)..... | 1 |
| Baking powder..... | 13 |
| Benzoin, cpd. tincture..... | 1 |
| Biscuits (rusks)..... | 1 |
| Bisto..... | 1 |
| Bleaching powder (chloride of lime)..... | 18 |
| Boracic acid ointment..... | 2 |
| Camphor spirits..... | 6 |
| Camphorated oil..... | 8 |
| Canned goods..... | 3 |
| Cassia, ground..... | 1 |
| Cayenne (and paprika)..... | 3 |
| Cloves, ground..... | 5 |
| Cochineal..... | 2 |
| Coffee and coffee substitutes..... | 89 |
| Corn starch..... | 1 |
| Cream..... | 1 |
| Cream tartar..... | 1 |
| Custard powders..... | 2 |
| Dried fruits..... | 3 |
| Egg substitute..... | 1 |
| Flour..... | 1 |
| Gelatine..... | 3 |
| Ginger, ground..... | 3 |
| Ginger, tincture..... | 1 |
| Glycerine..... | 1 |
| Honey..... | 5 |
| Hydrogen peroxide..... | 29 |
| Herrings in tomato sauce..... | 3 |
| Iodine tincture..... | 15 |
| Lard..... | 22 |
| Lemon flavouring..... | 5 |

| | |
|--------------------------------|-------|
| Lime water..... | 35 |
| Lime water tablets..... | 1 |
| Macaroni..... | 1 |
| Maple butter..... | 2 |
| Maple syrup..... | 28 |
| Mace..... | 1 |
| Mapleine..... | 1 |
| Marjoram..... | 1 |
| Molasses..... | 1 |
| Nitrous ether spirit..... | 6 |
| Nutmeg, ground..... | 1 |
| Olive butter..... | 1 |
| Olive oil..... | 15 |
| Oranges..... | 25 |
| Packages foods..... | 23 |
| Paraffin in confectionery..... | 93 |
| Peanut butter..... | 5 |
| Pepper, black..... | 16 |
| Pepper, white..... | 14 |
| Peppermint flavour..... | 1 |
| Pickles..... | 1 |
| Raspberry flavouring..... | 1 |
| Salted peanuts..... | 1 |
| Samples—re labelling..... | 7 |
| Strawberry flavouring..... | 1 |
| Sweet oil..... | 1 |
| Syrups, table..... | 3 |
| Tea..... | 4 |
| Toilet preparations..... | 6 |
| Turmeric..... | 1 |
| Vanilla flavouring..... | 5 |
| Vinegar..... | 75 |
| Wine..... | 1 |
| | <hr/> |
| Total..... | 633 |

Occasional Samples (from Federal Departments)

| | |
|--|----|
| Department of Agriculture, Dairy Division, butter..... | 6 |
| “ “ Fruit Division, dried fruits..... | 86 |
| “ “ Seed Branch, feeds..... | 17 |
| Department of Customs and Excise, Customs, beans..... | 34 |
| “ “ “ celery..... | 45 |
| “ “ “ cloves..... | 2 |
| “ “ “ cocoa..... | 22 |
| “ “ “ narcotics..... | 2 |
| “ “ “ nutmegs..... | 3 |
| “ “ “ olive oil..... | 35 |
| “ “ “ sugar..... | 1 |
| “ “ “ liquors..... | 2 |
| “ “ “ bottles, capacity of..... | 44 |
| Royal Canadian Mounted Police, narcotics..... | 40 |
| “ “ “ excise liquors..... | 2 |
| “ “ “ Indian Affairs, liquors..... | 2 |
| Royal Canadian Air Force, well water..... | 1 |

From Other Sources

| | |
|-------------------------------|-----|
| Baking powder..... | 1 |
| Cream tartar..... | 1 |
| Epsom salts..... | 1 |
| Honey..... | 1 |
| Liquors, for alcohol..... | 7 |
| Marmalade..... | 2 |
| Vanilla..... | 1 |
| Vinegar..... | 1 |
| Egg albumen..... | 1 |
| Occasional samples total..... | 360 |
| Grand total..... | 993 |

VANCOUVER

| | | | |
|------------------------------|-----|------------------------------------|-------|
| Allspice..... | 2 | Sugar..... | 49 |
| Albumen, egg..... | 2 | Thyme..... | 1 |
| Almonds..... | 1 | Tomato paste..... | 4 |
| Apples, evaporated..... | 6 | Tomato puree..... | 1 |
| Beans..... | 47 | Vanilla beans..... | 1 |
| Brazil nuts..... | 3 | Vinegar, concentrated..... | 2 |
| Cassia..... | 3 | Walnut meats..... | 35 |
| Celery seed..... | 1 | Walnuts, whole..... | 4 |
| Chutney, Indian..... | 1 | | |
| Cloves..... | 4 | | 889 |
| Cocoa..... | 1 | | |
| Colour, liquid egg..... | 1 | Total import samples..... | 1,005 |
| Coriander seed..... | 3 | | |
| Cream thickener..... | 1 | | |
| Dates..... | 2 | Domestic Samples submitted | |
| Eggs, dried..... | 1 | Ammonia, household..... | 4 |
| Eggs, whole..... | 3 | Apple juice..... | 3 |
| Essences, flavouring..... | 1 | Candy..... | 4 |
| Extracts, flavouring..... | 1 | Caramels..... | 39 |
| Figs..... | 3 | Camphorated oil..... | 9 |
| Flour, sausage..... | 2 | Chloride of lime..... | 18 |
| Ginger..... | 5 | Coffee and coffee substitutes..... | 4 |
| Grape fruit..... | 1 | Cocoa butter prep..... | 3 |
| Grape juice..... | 3 | Egg substitute..... | 4 |
| Herrings, canned..... | 1 | Figs..... | 4 |
| Maize..... | 9 | Fish, smoked..... | 1 |
| Macaroni..... | 7 | Ginger wine..... | 1 |
| Malt products, liquid..... | 1 | Herrings, canned..... | 18 |
| Milk, powdered, skimmed..... | 1 | Honey..... | 1 |
| Nutmegs, whole..... | 11 | Hydrogen peroxide..... | 10 |
| Oil, olive..... | 22 | Koline..... | 1 |
| Oil, cottonseed..... | 1 | Lime water..... | 30 |
| Oil, table..... | 1 | Lobster, canned..... | 2 |
| Oil, Wesson..... | 1 | Macaroni..... | 1 |
| Oranges..... | 715 | Marshmallow candy..... | 1 |
| Olives, black..... | 3 | Maple syrup..... | 2 |
| Paprika..... | 1 | Meat and fish products..... | 21 |
| Peanut nuts..... | 1 | Milk, evaporated..... | 1 |
| Peanuts in shell..... | 1 | Oil, olive..... | 2 |
| Pepper..... | 16 | Peas, canned..... | 2 |
| Pineapple, canned..... | 5 | Port wine..... | 1 |
| Preservatives..... | 5 | Sausages..... | 32 |
| Raisins..... | 1 | Shrimp, canned..... | 1 |
| Sage..... | 1 | Soft drinks..... | 8 |
| Savory..... | 1 | Sardines in oil..... | 1 |
| Salmon, canned..... | 3 | Tomato paste..... | 2 |
| Spice, mixed..... | 1 | Vinegars..... | 5 |
| Shrimp paste..... | 1 | | |
| | | Total domestic samples..... | 233 |

From Federal Departments

VANCOUVER—Concluded

From Federal Departments—Concluded

| | | |
|--------------------------------|--------------------------------|----|
| Customs-Excise Department, | Beer bottles for capacity..... | 3 |
| " | " | 2 |
| " | " | 1 |
| " | " | 1 |
| " | " | 1 |
| | Preservatives..... | 8 |
| Royal Canadian Mounted Police, | Chinese medicine..... | 1 |
| " | " | 2 |
| " | " | 28 |
| " | " | 1 |
| " | " | 1 |
| " | " | 4 |
| | | 37 |
| Special samples: Salmon..... | | 1 |
| " | Wood ashes..... | 1 |
| | | 2 |

Summary

| | |
|------------------------------------|-------|
| Import samples..... | 1,005 |
| Domestic samples..... | 233 |
| Department of Agriculture..... | 121 |
| Department of Customs..... | 8 |
| Royal Canadian Mounted Police..... | 37 |
| Special samples..... | 2 |
| | 1,406 |

RESUME OF INSPECTORS' ACTIVITIES

For the field enforcement of the Food and Drugs Act, the Maple Products Act, and the Proprietary or Patent Medicines Act, the Dominion is divided into twenty-five Inspectorial Districts, and there are twenty-five inspectors, all of whom, with one exception, are full-time men.

| | |
|----------------------------------|--------|
| Towns and cities visited..... | 1,192 |
| Business places visited..... | 13,232 |
| Complaints received..... | 660 |
| Samples collected..... | 4,952 |
| Prosecutions..... | 85 |
| Warnings given..... | 1,012 |
| Seizures made..... | 81 |
| Importations detained..... | 333 |
| Goods voluntarily destroyed..... | 46 |

PROSECUTIONS

| Nature of Sample— | Number |
|---------------------------------|--------|
| Aromatic spirit of ammonia..... | 1 |
| Baking powder..... | 1 |
| Butter..... | 39 |
| Camphorated oil..... | 8 |
| Caramels..... | 3 |
| Cloves..... | 3 |
| Coffee..... | 2 |
| Essence of peppermint..... | 1 |
| Ginger..... | 1 |
| Maple sugar..... | 2 |
| Maple syrup..... | 4 |
| Molasses..... | 1 |
| Mustard..... | 1 |
| Pepper..... | 1 |
| Sausages..... | 4 |
| Soft drink..... | 1 |
| Seidlitz powder..... | 6 |
| Spirits of camphor..... | 1 |
| Sweet oil..... | 2 |
| Sweet spirit of nitre..... | 1 |
| Vanilla extract..... | 1 |
| Vinegar..... | 1 |
| Total..... | 85 |

(10) PUBLIC WORKS HEALTH ACT

The regulations made under authority of this Act require that every public work within the legislative authority of the Parliament of Canada be periodically inspected by a medical officer of the Department of Health, in order to see that the said regulations are enforced and complied with, having in view the preservation of health and the mitigation of disease among the persons employed thereon. This includes the inspection of the accommodation afforded said employees so as to ensure its sanitary condition, the provision of adequate hospital accommodation and medical attention in time of sickness, disease or accident, and the proper isolation and care of persons suffering from contagious or infectious diseases.

WESTERN CANADA

Dr. A. E. Clendenan, medical inspector for Western Canada, reports as follows:—

"The public work inspected was limited entirely to railway construction. No epidemics occurred on any of the contracts. A medical service was freely provided by the contractors without request, with one exception. In this case it was installed at once when representations were made by your Inspector as to the requirements of the Act.

"All the construction work during the past year was on branch lines of the Canadian Pacific Railway, and in all cases it was feasible and advisable to use established municipal and red cross hospitals by special arrangements with them. Sick employees like them better than temporary hospitals along the grade, and they are much better for surgical cases.

"The following contracts were visited as often as was necessary to keep the medical service up to standard:—

"Canadian Pacific Railway, Cutknife Branch from Cutknife, Sask. to Battle River, Alberta: Chief contractor, W. A. Dutton, Winnipeg, Man.; principal sub-contractors, P. Mannix, Jas. Fitzgerald, A. Young, E. Foley; total employees, 208; Dr. Banting, Cutknife, Sask. in charge; the local Red Cross Hospital was used.

"Canadian Pacific Railway, Leancoil, B.C.: Contractor, H. H. Boomer, Leancoil, B.C., with 180 employees; Dr. Ewert in charge; hospital conducted by Golden Hospital Society.

"Canadian Pacific Railway, Mildren-Empress Line in Saskatchewan: Force work with 156 employees; F. Jackson, Rosetown, chief contractor, with the following sub-contractors: A. Marks, P. Jackson, Frizzell and Simmons; total employees, 100; Dr. A. A. Drinnan, Outlook, in charge and using the Outlook Municipal Hospital.

"Canadian Pacific Railway, Rosetown, southeasterly: Wm. Dutton, chief contractor; principal sub-contractors, D. Grant, Ward and Sproule, Van Buskirk; total employees, 130; Dr. Johnson, Brock, Sask., in charge, having a private hospital of six beds.

"Canadian Pacific Railway, Wymark—Archives, Sask.: First contract of 35 miles by Stewart & Welsh, Vancouver, B.C., who sublet to J. A. Sandgren, Kimfall Bros., and Morrison & Dempster; second contract of 15 miles to D. Grant; total employees, 283; Dr. Knippel, Swift Current, Sask., in charge, using Swift Current Municipal Hospital.

"Canadian Pacific Railway, Naicarn, Melfort, Sask: Chief contractors were Stewart & Cameron, 167 Grain Exchange, Winnipeg, Man., assisted by nine sub-contractors; total employees, 243. Doctors in charge were Dr. Thorn, Pleasantdale, and Dr. Baker, Melfort. Hospital used was Melfort Municipal.

"Canadian Pacific Railway (1) Tuffnell, Sask. to 20 miles north of Wadena, Sask., 50 miles in all. Chief contractors were Grant Smith & Co., and McDonald Ltd., Vancouver, B.C. There were eight small sub-contractors; total employees, 180.

"(2) Extension of above line for 45 miles to Tisdale, Sask., also contracted by Grant Smith & Co., and McDonald Limited, with Treadway & Sons, Tisdale, and Jas. Miller, Tisdale, as sub-contractors; total employees, 225. Medical service was furnished by Dr. Rollins of Wadena and Dr. Somers of Foam Lake with hospitals in Wadena and Tisdale."

EASTERN DIVISION

The Inspector for Eastern Canada reports as follows:—

"The chief works going on in the Eastern Division are the construction of the dry dock at Courtenay Bay, N.B., and of the Welland canal.

"*Courtenay Bay*.—Courtenay Bay is situated about three miles from the centre of St. John, N.B.

"The work consists of the building of a dry dock and the dredging of the bay. The average number of men employed is from six hundred to seven hundred. The work is carried out by contracts and sub-contracts and all of the personnel are placed under the provisions of the Workmen's Compensation Act of New Brunswick.

"With the exception of perhaps eight or ten workmen, all the others reside at St. John. The quarters occupied by the few workmen who are living on the construction plant are clean and comfortable. The meals are provided by the Dry Dock Company and the food is of excellent quality. Full provision is made for the medical and surgical care of the employees. There have been very few accidents during the year. Those that occurred were of minor nature.

"*Welland Canal*.—

"From a professional standpoint two matters are of interest: first, the increase in the number of patients requiring medical and surgical attention and, second, the more decided interest taken in this work by the Workmen's Compensation Board.

"The number of patients.—Our records afford the following statistics:—

"(a) The Canal Hospital, April 1, 1923, to March 31, 1924:

"Out-patient clinical examinations and treatments 3,413.

"Visits made to employees sick or injured at their homes 897.

"Patients admitted to the wards of the hospital 122.

"Hospital days 2,449.

"Deaths in hospital 4.

"(b) The Thorold Office:

"Out-patient clinical examinations and treatments 1,948.

"(c) General averages.—Of the number of patients treated the percentage of illness as against surgical (mostly accident) cases is: Medical cases, 39 per cent; surgical cases, 31 per cent.

"The percentage of returned men applying for treatment is 18.5 per cent.

"I am glad to say that the instructions I gave during my last visit, concerning the sanitation of camps, were in the main carried out. At lock No. 2, a building occupied by sub-contractors Aiken and Innes for their employees and which was condemned as totally unfit for human habitation has been abandoned. In addition, Campbell's Hotel at Port Robinson, which was likewise condemned is no longer in use. While there is some room for improvement, the sanitary conditions are in the main satisfactory.

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"In my last report, I pointed out the fact that dredges working in the Port Robinson section were discharging raw sewage into the canal. This would appear to have been a contributory factor to the outbreak of typhoid which occurred at Thorold. This pollution has now ceased.

"While sanitary conditions in the canal area are on the whole satisfactory, there is still room for some improvement in the camps, and it is hoped that the advice which has been tendered by your Inspector in this regard will result in further improvement."

(11) POLLUTION OF BOUNDARY WATERS

By Order in Council of June 19, 1923 (P.C. 1091), approval was given to the "Regulations concerning Water for Drinking and Culinary purposes on Vessels navigating on the Great Lakes and Inland Waters."

The following is a report of the work done towards the enforcement of these regulations during the navigating season of 1923.

The general idea underlying the work done was a reconnaissance of the conditions prevailing relative to the supply of a potable water for drinking and culinary purposes for vessels engaged in navigation on the Great Lakes.

This involved the physical examination of the pumps, piping, tanks, outlets and water purification apparatus, if any, aboard these vessels, as well as a quick reconnaissance of the vessels themselves for possible causes of contamination of the water supply; visits to the docks at the terminal ports of the various fleets of passenger steamships engaged in this traffic; correspondence and interviews with health and navigation officials regarding the certification of water supplies ashore, compliance with regulations for maintenance of water supplies of standard quality, etc.

Considerable co-operative work has been carried on with the representative of the United States Public Health Service, by correspondence, reports of steamship inspections, certification of water supplies, and water analyses reports exchanged.

Throughout the season, steamship companies operating vessels in passenger service on the Great Lakes have been supplied with copies of Water Analyses reports and where it seemed advisable, attention of the management of these organizations was drawn to flagrant violations of the Regulations. Also copies of the Regulations concerning water for Drinking and Culinary purposes on vessels navigating on the Great Lakes and Inland Waters of Canada, were distributed to every known Canadian steamship company operating vessels on the Great Lakes.

A definite result is shown by the improvement in the quality of the drinking and culinary water in use by the following companies:—

(1) Niagara, St. Catharines and Toronto Railway and Navigation Company; the ss. *Dalhousie City* and *Northumberland* have now the record for the cleanest water in the port of Toronto. for the season 1923; whereas formerly they were reported against as careless by the officials of the Department of Health, City Hall, Toronto.

(2) The Canadian Pacific Great Lakes Passenger Steamship Service was improved by alterations to the drinking water tanks on board the ss. *Manitoba*, the capacity of this tankage being changed from about 900 gallons to 5,200 imperial gallons, which is equivalent to 30 gallons per capita. On the occasion of re-examination of this steamship on August 10, the shore superintendent for the Canadian Pacific Railway at Port McNicol, expressed his appreciation of the work being done by health officials to improve the water service on their vessels.

(3) The Dominion Transportation Company and the Owen Sound Transportation Company both have shown appreciation of the work being done.

Bacteriological reports of samples of water taken throughout the season of navigation from the vessels of these organizations are evidence of improvement accomplished by cleaning and chlorinating the ships' water supply systems.

(4) Three deaths from typhoid fever having been reported among the crew of the freighter *Canadian Engineer* of the Canadian Government Merchant Marine, special attention was given to this vessel and the attention of the Master particularly drawn to various possible sources of contamination of the water supply aboard his ship.

Certification of the municipal water supplies at various Great Lakes ports having been obtained from such authorities as the Provincial Board of Health for Ontario ports and the United States Public Health Service for ports on the other shore, note was taken of the facilities available at the docks of ports visited for supply of such water to vessels. It was found that:—

At Montreal, vessels of the Canada Steamships Line obtain water from hydrants at Victoria pier.

At Prescott, drinking water is obtained from the municipal system by the Prescott and Ogdensburg ferry steamships.

At Kingston, water is taken by various passenger vessels.

At Toronto, passenger vessels of the following steamship companies fill their tanks from hydrants at the wharves, viz.:—

(1) Niagara, St. Catharines and Toronto Railway and Navigation Company.

(2) Canada Steamships Lines Limited.

(3) Toronto Ferry Company.

Windsor-Walkerville area has two points where steamships may fill their water tanks, viz., at hydrant at foot of Brock Street and the hydrants at Walker dock.

Sarnia has pipe lines laid on to the docks at Point Edward.

Midland wharf is provided with water pipes that are supplied by the municipal water works.

Of the eighteen Canadian ports, suggested by officials of the Provincial Board of Health of Ontario as probably capable of furnishing water equal to the United States Treasury standard, only seven have facilities at the wharves from which vessels may obtain drinking and culinary water.

As the polluted water of Great Lakes harbours is unfit for use, and vessels are often detained for periods of variable duration at these ports, it is very important that the storage capacity of the tanks for drinking and culinary water should be ample.

That there is a great variation in the quantity of water available for drinking and culinary purposes on Great Lakes vessels is clearly shown. It is also noticeable that although it is a comparatively simple matter to obtain water of the required standard, there are numerous passenger vessels of Canadian register in this area, whose water tanks have a per capita capacity less than the water consumption on vessels of the British Navy or Merchant Marine.

In this regard it is of interest to note, that almost invariably, the bacteriological records of steamships having water tanks of small capacity, such as the *Manitoba*, *Caribou*, *Manitou*, *Midland City*, *Alberta*, *Bon Ami*, *Corona*,

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Cayuga, Rapids King, Rapids Queen, were far from satisfactory. There would appear to be two important points with respect to the water tanks, i.e.:—

- (1) They must be kept clean.
- (2) They should be of ample capacity.

In the cases of the passenger steamships in the above list, not only were the tanks for drinking and culinary water inadequate in size, but also, laboratory tests of samples of water taken at regular intervals from the supply systems aboard these vessels, showed the culinary and drinking water to be badly contaminated by the presence of colon bacilli in excess.

The provision for protection of the water supply, at the waterworks, has been noted at practically every terminal port visited through the season. It was observed that with perhaps three exceptions, the method of disinfection was by means of liquid chlorine.

With regard to the responsibility for supervision of the supplies of water for drinking and culinary purposes, on passenger steamships, engaged in other than ferry service on the Great Lakes system, a general division of the traffic is as follows:—

On the lake Ontario-river St. Lawrence routes the tourist traffic is carried almost entirely by passenger steamships of Canadian register.

On lakes Erie and Michigan the opposite condition holds true. But, on the lakes Huron-Superior service statistics, compiled by officials of the United States, show that sixty-one per cent of the travelling public is carried by passenger steamships owned in Canada.

The taking of water samples and the reports on their subsequent analyses by health officials at Toronto, Windsor, Owen Sound and Fort William, has been a powerful aid in accomplishing such improvements as have been made this season.

During the present season of navigation the appearance of fleets such as those of the Bay Line, Eastern Steamships Company and other owners have increased shipping of Canadian register on the lower lakes by over forty steamships. So also, a Norwegian fleet of some sixteen steamships has added to the problems involved in the whole matter under investigation. To handle these steamships in the Great Lakes, pilots of Canadian nationality are taken aboard at Montreal. These pilots should be instructed as to the regulations concerning drinking and culinary water, restricted areas, etc.

Typhoid fever among passengers and crews of Great Lakes steamships is undoubtedly much greater than is shown by the figures given below which were compiled from data of a fragmentary nature. The limited time spent on the whole question of water supply of the Great Lakes shipping did not admit of a thorough investigation of any particular phase of the matter.

The total number of cases of typhoid fever reported from Great Lakes shipping during the period under review is as follows:—

Steamships of Canadian register—45 cases, 7 deaths.

Steamships of United States register to August 18, 1923.—18 cases, 1 death.

SUMMARY OF SEASON'S WORK, 1923

| Vessels boarded by Health Officials | Port | Had vessel separate supply system | Number of anal- yses of water supply | Remarks |
|---|---|--|--|---|
| "Keewatin"..... | {Sault Ste. Marie Port William Port McNicol Port McNicol | Yes | 7 | Considerable improvement in quality of water supplied. |
| "Assiniboia"..... | {Sault Ste. Marie Port William | Yes | 11 | Considerable improvement in quality of water supplied; two persons developed typhoid in August. |
| "Manitoba"..... | {Owen Sound Port McNicol Sault Ste. Marie | Yes, but inadequate | 12 | Two cases of typhoid developed in August. New tank capacity of 5,200 gallons put aboard this ship. |
| "Alberta"..... | {Port McNicol Sault Ste. Marie | No | 2 | Water is very bad. |
| "Athabaska"..... | Port McNicol..... | No | | |
| "Hagarty"..... | Port McNicol..... | No | | |
| "Grant Morden"..... | Port McNicol..... | Yes | | |
| "Mathewston"..... | Port McNicol..... | No | 1 | |
| "Noronic"..... | {Sarnia Sault Ste. Marie | Yes—but also is by passed Yes | 17 | Water supplied is of variable quality. By passes on water system. |
| "Hamonic"..... | {Sault Ste. Marie Walkerville | Yes | 10 | Water supplied of fair quality—Ultra Violet apparatus in use. |
| "Huronie"..... | Sault Ste. Marie. | Tank in hull | 8 | Water supplied of variable quality; storage tank in hull. |
| "Thousand Islander" | {Chatham Detroit | Yes | 6 | Water supplied of fair quality. |
| "Rapids King"..... | {Wallaceburg Erieau | Yes | 3 | Water supply troublesome. At one period of season of 1923 there were 26 members of ship's crew laid up with cramps, diarrhoea, etc. |
| "George R. Gray"..... | Sault Ste. Marie. | No | 4 | Water unfit for use. Laboratory Test (Russel's Double Sugar) showed evidence of presence of typhoid bacillus on August 18. |
| "Caribou"..... | Sault Ste. Marie. | No | 12 | Water of doubtful quality, great variation from dangerous to safe. |
| "Manitou"..... | {Owen Sound Sault Ste. Marie} | No | 15 | Water of very doubtful quality, varying from absolutely foul and dangerous to safe. (Cattle are carried as well as passengers.) |
| "Michipicoten"..... | {Sault Ste. Marie Owen Sound | No | 6 | Water aboard ship of varying quality from bad to fair. |
| "Bon Ami"..... | Sault Ste. Marie. | No | 11 | Water has been bad all season. Laboratory test of August 21 showed evidence of presence of <i>Paratyphoid</i> . |
| "Henry Pedwell"..... | Owen Sound..... | No | 3 | Water bad. |
| "Chippewa"..... | Toronto..... | Combined | 2 | By passes ordered removed from water system. |
| "Corona"..... | Toronto..... | Combined | 3 | By passes ordered removed from water system. |
| "Kingston"..... | Toronto..... | Combined | 2 | By passes ordered removed from water system. |
| "Cayuga"..... | Toronto..... | Yes | 6 | Water of fair quality. |
| "Canadian"..... | Toronto..... | Combined | | Water in tanks filthy at time of inspection. |
| "Northumberland"..... | Toronto..... | Yes | 7 | Decided improvement in water by middle of summer. |
| "Dalhousie City"..... | Toronto..... | Yes | 8 | Water supplied is of fair quality. |
| "Edmonton"..... | Port Arthur..... | Combined | 1 | Analyses of water on June 3 showed water of good quality. |
| "Glenmount"..... | Sault Ste. Marie. | Combined | | Foul odour from sanitary conveniences. |
| "Maplecourt"..... | Sault Ste. Marie. | Combined | | |
| "Collingwood"..... | Sault Ste. Marie. | Combined | 1 | Water showed presence of Colon Bacilli in 10 c.c. June 10. |
| "Toronto"..... | Toronto..... | Separate | 5 | Water supplied of fair quality. |
| "Kingston"..... | Toronto..... | Combined | 2 | Ordered by pass between sanitary and drinking systems taken out to give separate systems. |

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SUMMARY OF SEASON'S WORK, 1923—Continued

| Vessels boarded by Health Officials | Port | Had vessel separate supply system | Number of anal- yses of water supply | Remarks |
|---|----------------------------|--|--|--|
| "Macassa"..... | Toronto..... | Separate | 6 | Analyses showed water of fair quality. |
| "Modjeska"..... | Toronto..... | Yes | 3 | Analyses showed water of fair quality. |
| "City of Dover"..... | Midland..... | No | ..... | Very unsatisfactory water supply aboard this SS. for passenger service. |
| "Midland City"..... | Midland..... | Yes | 8 | Water supplied is of fair quality. |
| "Glenlivet"..... | Midland..... | Combined | ..... | ..... |
| "A. J. McKee"..... | Midland..... | Combined | ..... | ..... |
| "South American"..... | Parry Sound..... | Separate | 4 | Ultra Violet apparatus aboard this steamship; water supplied of good quality. |
| "Kearsarge"..... | Depot Harbour..... | Separate | 2 | Tripure still—water supplied seems good. |
| "Laketon"..... | Port Colborne..... | Combined | ..... | Ship has distilling apparatus but is not using it at present. |
| "Berryton"..... | Port Colborne..... | Hodges Still | ..... | Ship lives up to Regulations. |
| "Glenisla"..... | Port Colborne..... | Combined | ..... | ..... |
| "Cape Trinity"..... | Toronto..... | Combined | 2 | This is an old ship and needs con- siderable attention—separate sea- cock. Present system had to be abandoned and York Springs bottled water used for drinking from end of July. Analyses made at City Hall, Toronto, showed water to be foul. |
| "Claremont"..... | Toronto..... | Combined | ..... | No separation between pumps for sanitary and drinking services. |
| "Frank E. Kerby"..... | Kingsville..... | Yes | 7 | Water from city system of Detroit. |
| "Pelee"..... | Kingsville..... | Combined | ..... | This SS. carries mail, passengers and express. |
| "Marquette No. 2"..... | Erieau..... | Common seacock | ..... | Drinking water is passed through "Tripure Still." |
| "Wm. H. Daniels"..... | Erieau..... | Combined | ..... | New ship built in Britain in 1923. |
| "E. B. Osler"..... | Sault Ste. Marie..... | Combined | ..... | Inspection showed that sanitary sys- tem was not posted. |
| "Sarnian"..... | Sault Ste. Marie..... | Combined | ..... | ..... |
| "Greypoint"..... | Toronto..... | Combined | ..... | Distilling apparatus not being used— needs watching. |
| "Canadian Engineer"..... | (Montreal Fort William) | Combined | ..... | Tanks not properly looked after, laboratory report showed Colon in 1 c.c. August 2. |
| "Miss Vanderburg"..... | Prescott..... | Separate | ..... | ..... |
| "Ferdinand"..... | Prescott..... | Separate | ..... | ..... |
| "Charles Lyon"..... | Prescott..... | To be install- ed soon | ..... | ..... |
| "Rapids Queen"..... | Prescott..... | Yes | ..... | Water is obtained from city system of Victoria Pier, Montreal. |
| "Yenneck II"..... | Gananoque..... | Yes | ..... | This vessel needs attention, company notified. |
| "Dalrymple"..... | Kingston..... | Combined | ..... | No purification provided for aboard this vessel. |
| "Susie Chipman"..... | Kingston..... | Combined | ..... | No purification provided for aboard this vessel. |
| "Waubic"..... | Kingston..... | Combined | ..... | No purification provided for aboard this vessel. |
| "Wolfe Islander"..... | Kingston..... | No | ..... | Proposal to use water from city system of Kingston, Ont. |
| "Ontario No. 2"..... | Cobourg..... | Separate | ..... | Water passed through Tripure filters. |
| "Harrison"..... | Owen Sound..... | ..... | 2 | Water of fair quality obtained in Georgian bay. Tanks clean. |
| "Keenan"..... | Owen Sound..... | ..... | 3 | Water of good quality obtained in Georgian bay. Tanks clean. |
| "Glenellah"..... | Port Arthur..... | ..... | 1 | Water of fair quality. |
| "Pabjune"..... | Port Arthur..... | ..... | 1 | Water of good quality. |
| "Arabian"..... | Port Arthur..... | ..... | 2 | Water of variable quality. |
| "Metcalfe"..... | Port Arthur..... | ..... | 1 | Water of good quality. |
| "Turret Court"..... | Port Arthur..... | ..... | 1 | Water of good quality. |
| "Glenfinnan"..... | Port Arthur..... | ..... | 1 | Water of good quality. |
| "Turret Cape"..... | Port Arthur..... | ..... | 1 | Water of good quality. |

SUMMARY OF SEASON'S WORK, 1923—*Concluded*

| Vessels boarded by Health Officials | Port | Had vessel separate supply system | Number of anal- yses of water supply | Remarks |
|---|------------------|--|--|--|
| "Beaverton"..... | Port Arthur..... | | 1 | Water foul, shows presence of colon in 1/10th c.c. |
| "Mariel"..... | Owen Sound..... | | 1 | Water of good quality obtained in Georgian bay. |
| "Grenville"..... | Owen Sound..... | | 1 | Water of good quality. |
| "Wahnapitae"..... | Owen Sound..... | | 1 | Water foul, shows presence of colon in 1/100 c.c. |
| "Queen"..... | Owen Sound..... | | 1 | Water of doubtful quality obtained overboard. |
| "Primrose" "Jasmine" "Bluebell" "John Hanlan"..... | Toronto..... | | | Steamers of Toronto Ferry Company merely carry water for crew. This is obtained from city of Toronto system. |

(12) FINANCIAL STATEMENT

SUMMARY OF EXPENDITURE

| Service | Gross Expend- iture | Refunds to Appro- priations | Net Expend- iture |
|---|---------------------------|-----------------------------------|-------------------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Foods and Drugs..... | 77,750 63 | 2,228 82 | 75,521 81 |
| Opium and Narcotic Drugs..... | 15,277 98 | | 15,277 98 |
| Proprietary or Patent Medicines..... | 2,827 46 | | 2,827 46 |
| Pollution of Boundary Waters..... | 2,496 86 | | 2,496 86 |
| Marine Hospitals..... | 112,654 35 | 2,861 33 | 109,793 02 |
| Quarantine..... | 191,159 93 | 963 33 | 190,196 60 |
| Leprosy..... | 16,613 98 | 53 29 | 16,560 69 |
| Public Works Health Act..... | 3,436 62 | 25 59 | 3,411 03 |
| Immigration Medical Inspection..... | 51,839 23 | 1,840 00 | 49,999 23 |
| Laboratory of Hygiene..... | 9,783 95 | 138 55 | 9,645 40 |
| Venereal Diseases..... | 186,459 70 | | 186,459 70 |
| Civil Government Salaries..... | 140,626 33 | 25 00 | 140,601 33 |
| Civil Government Contingencies..... | 63,548 12 | 2,935 70 | 60,612 42 |
| Provisional Bonus Allowance..... | 22,033 74 | 6 02 | 22,027 72 |
| Retirement Act, 1920, Superannuation No. 4..... | 1,530 00 | | 1,530 00 |
| Canadian National Council of Child Welfare..... | 5,000 00 | | 5,000 00 |
| Canadian Social Hygiene Council..... | 5,000 00 | | 5,000 00 |
| | 908,038 88 | 11,077 63 | 896,961 25 |

STATEMENT OF REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL
YEAR 1923-24

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|------------------|----------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| "A"—Food and Drugs..... | 6,101 55 | 5 00 | 6,096 55 |
| "B"—Opium and Narcotic Drugs..... | 20,435 84 | 1,036 00 | 19,399 84 |
| "C"—Patent Medicines..... | 7,094 00 | 497 00 | 6,597 00 |
| "D"—Sick Mariners' Dues..... | 173,051 55 | 732 40 | 172,319 15 |
| "E"—Casual Revenue..... | 3,198 38 | | 3,198 38 |
| | 209,881 32 | 2,270 40 | 207,610 92 |

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"A"—FOOD AND DRUGS NET REVENUE FOR 1923-1924.

| | Analysis Fees | Penalties | Costs | Total |
|-----------------------|------------------|-----------|---------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 22 00 | | | 22 00 |
| New Brunswick..... | 20 00 | 25 00 | 10 00 | 55 00 |
| Quebec..... | 31 00 | 1,750 00 | 650 15 | 2,431 15 |
| Ontario..... | 2,567 00 | 725 00 | 128 40 | 3,420 40 |
| Manitoba..... | 82 00 | | | 82 00 |
| Saskatchewan..... | 6 00 | | | 6 00 |
| Alberta..... | 3 00 | | | 3 00 |
| British Columbia..... | 2 00 | 75 00 | | 77 00 |
| | 2,733 00 | 2,575 00 | 788 55 | 6,096 55 |

"B"—OPIUM AND NARCOTIC DRUGS NET REVENUE, 1923-1924.

| | Business Licenses | Import Licenses | Export Licenses | Penalties | Seizures | Total |
|-----------------------|----------------------|--------------------|--------------------|-----------|----------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 90 00 | | | 12 50 | | 102 50 |
| New Brunswick..... | 115 00 | | | 1,700 00 | | 1,815 00 |
| Quebec..... | 1,090 00 | 485 00 | 40 00 | 5,499 00 | 849 31 | 7,963 31 |
| Ontario..... | 1,080 00 | 140 00 | 25 00 | 1,674 35 | | 2,919 35 |
| Manitoba..... | 255 00 | 5 00 | | 885 00 | | 1,145 00 |
| Saskatchewan..... | 100 00 | | | 1,625 00 | | 1,725 00 |
| Alberta..... | 145 00 | | | 1,237 18 | | 1,382 18 |
| British Columbia..... | 85 00 | 5 00 | | 2,257 50 | | 2,347 50 |
| | 2,960 00 | 635 00 | 65 00 | 14,890 53 | 849 31 | 19,399 84 |

"C"—PATENT MEDICINES NET REVENUE, 1923-24

| | Penalties | Regis- tration Fees at \$2 each | License Fees at \$1 each | Total |
|---------------------------|-----------|---|-----------------------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 14 00 | 55 00 | 69 00 |
| New Brunswick..... | | 22 00 | 138 00 | 160 00 |
| Prince Edward Island..... | | | 7 00 | 7 00 |
| Quebec..... | | 401 00 | 1,371 00 | 1,772 00 |
| Ontario..... | 35 00 | 730 00 | 2,194 00 | 2,959 00 |
| Manitoba..... | | 38 00 | 177 00 | 215 00 |
| Saskatchewan..... | | 4 00 | 25 00 | 29 00 |
| Alberta..... | | 58 00 | 77 00 | 135 00 |
| British Columbia..... | | 32 00 | 142 00 | 174 00 |
| Foreign..... | | 220 00 | 857 00 | 1,077 00 |
| | 35 00 | 1,519 00 | 5,043 00 | 6,597 00 |

"D"—SICK MARINERS' DUES REVENUE, 1923-1924

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|---------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 43,492 16 | 289 30 | 43,202 86 |
| New Brunswick..... | 18,536 34 | 52 64 | 18,483 70 |
| Prince Edward Island..... | 471 82 | | 471 82 |
| Quebec..... | 46,039 66 | 125 08 | 45,914 58 |
| British Columbia..... | 64,511 57 | 265 38 | 64,246 19 |
| | 173,051 55 | 732 40 | 172,319 15 |

"E"—CASUAL REVENUE, 1923-24

| | Total |
|---|----------|
| | \$ cts. |
| Sale of Bulletins..... | 12 50 |
| Fumigation Certificates..... | 30 00 |
| Miscellaneous refunds to previous years appropriations..... | 3,155 88 |
| | 3,198 38 |

DOMINION OF CANADA

REPORT

OF THE

DEPARTMENT OF HEALTH

FOR THE

FISCAL YEAR ENDED MARCH 31, 1925



OTTAWA

F. A. ACLAND

PRINTER TO THE KING'S MOST EXCELLENT MAJESTY

1925

*To General His Excellency the Right Honourable Lord Byng of Vimy, G.C.B.,
G.C.M.G., M.V.O., Governor General and Commander in Chief of the
Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:—

I have the honour to submit, herewith, for the information of Your Excellency and the Parliament of Canada, the Annual Report of the Department of Health, being for the year ended March 31, 1925.

I have the honour to be, sir,

Your Excellency's most obedient servant,

H. S. BELAND,
Minister of Health.

OTTAWA, September 1, 1925.

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REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE FISCAL YEAR ENDED MARCH 31, 1925

OTTAWA, August 28, 1925.

Hon. H. S. BÉLAND, M.D.,
Minister of Health,
Ottawa.

SIR,—I have the honour to report on the Department of Health for the year ended March 31, 1925, under the following headings:—

1. Quarantine Service (including Leper Stations).
2. Immigration Medical Service.
3. Marine Hospitals Service.
4. Venereal Disease Control.
5. Hospitalization and Sanitation.
6. Opium and Narcotic Drugs.
7. Proprietary or Patent Medicines.
8. Child Welfare.
9. Food and Drug Division.
10. Laboratory of Hygiene.
11. Pollution of Boundary Waters.
12. Financial Statement.

J. A. AMYOT,
Deputy Minister of Health.

QUARANTINE SERVICE

The following organized quarantine stations were maintained during the fiscal year:—

Province of Quebec.—Grosse Isle in the river St. Lawrence (with Father Point as the inspecting base); with Quebec and Montreal Harbours as substations.

Province of Nova Scotia.—(a) Halifax, the Harbour and Lawlor's Island; (b) Sydney, North Sydney, the Harbour and Point Edward.

Province of New Brunswick.—St. John, the Harbour and Partridge Island.

Province of British Columbia.—Victoria, the Harbour and William Head; with Vancouver and the Harbour as a substation.

Each organized quarantine station is in charge of a medical quarantine officer.

A substation is a port of final destination where vessels, when empty, can, with greater facility, be fumigated or disinfested, and where other functions may, when required, be performed, as directed by the Minister.

Each substation is in the immediate charge of the chief or senior immigration medical officer, ex officio, except when otherwise provided by the Minister.

The following table shows the number of vessels and personnel inspected at the several stations:—

| Station | Vessels inspected | Passengers | | | Crews | Cattle-men | Stow-aways | Dis-tressed seamen, etc. | Total persons in-spected |
|--|-------------------|-------------|-------------|-------------|---------|------------|------------|--------------------------|--------------------------|
| | | First Class | Cabin Class | Third Class | | | | | |
| <i>Province of Quebec—</i> Father Point..... | 944 | 3,268 | 39,877 | 67,726 | 82,743 | 598 | 134 | ..... | 194,346 |
| <i>Province of Nova Scotia—</i> Halifax..... | 500 | 9,768 | 27,959 | 48,925 | 65,652 | 49 | 36 | 76 | 152,465 |
| North Sydney..... | 93 | ..... | 50 | ..... | ..... | 3,182 | 5 | ..... | 3,237 |
| <i>Province of New Brunswick</i> St. John..... | 275 | 2,802 | 1,641 | 12,004 | 19,175 | 154 | 16 | 46 | 35,838 |
| <i>Province of British Colum-bia—</i> William Head..... | 716 | 10,582 | 3,679 | 17,661 | 53,979 | ..... | 26 | ..... | 85,927 |
| Totals..... | 2,528 | 26,420 | 73,206 | 146,316 | 221,549 | 3,983 | 217 | 122 | 471,813 |

Persons to the number of 240 were detained at quarantine stations. Of these, 41 were sick with quarantinable or minor infectious disease; the remainder were either detained for observation as possible contacts of the respective diseases or were members of families accompanying the sick, from whom they could not well be separated.

Following a change of policy, all minor infectious cases found on vessels coming up the St. Lawrence river, were landed at Quebec and transferred to the Savard Park Immigration Hospital for treatment. Hitherto similar cases had been landed at Grosse Isle. The cases treated at Savard Park are reported under the Immigration Medical Service Division.

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY STATIONS

| Station | Sick | Hospital days | Contacts and persons accom-panying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|--------------------------------------|------|---------------|---|--------------------------|------------------------|---|
| Halifax, N.S. (Lawlor's Island)... | 20 | 221 | 20 | 191 | 40 | 412 |
| St. John, N.B. (Partridge Island)... | 18 | 178 | 23 | 196 | 41 | 374 |
| Victoria, B.C. (William Head).... | 3 | 92 | 156 | 779 | 159 | 871 |
| Totals..... | 41 | 491 | 199 | 1,166 | 240 | 1,657 |

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY DISEASES

| Diagnosis | Sick | Hospital days | Contacts and persons accompanying sick | Period of detention in days | Total persons detained | Total days in hospital and detention quarters |
|-----------------------|------|---------------|--|-----------------------------|------------------------|---|
| Chickenpox..... | 9 | 119 | 13 | 120 | 22 | 239 |
| Coryza..... | 1 | 4 | | | 1 | 4 |
| Diphtheria..... | 1 | 25 | 2 | 50 | 3 | 75 |
| Erysipelas..... | 1 | 8 | 3 | 24 | 4 | 32 |
| Erythema simplex..... | 1 | 3 | | | 1 | 3 |
| Measles..... | 18 | 193 | 19 | 155 | 37 | 348 |
| Mumps..... | 3 | 22 | 4 | 25 | 7 | 47 |
| Paratyphoid..... | 1 | 8 | | | 1 | 8 |
| Scarlet fever..... | 1 | 4 | 1 | 4 | 2 | 8 |
| Smallpox..... | 3 | 92 | 156 | 779 | 159 | 871 |
| Vaccinia..... | 2 | 13 | 1 | 9 | 3 | 22 |
| Totals..... | 41 | 491 | 199 | 1,166 | 240 | 1,657 |

The new departure at the various quarantine stations of having the personnel, under the supervision of the division, execute minor repairs, painting, etc., has worked out with excellent results.

The following extracts are from reports received from the respective quarantine officers:—

Grosse Isle, Quebec (Medical Superintendent, Dr. G. E. Martineau):—

“The inspection of vessels continued last season to be carried out at Father Point under the immediate supervision of Dr. W. W. Aylen and of his assistant, Dr. J. B. Peloquin. Instead of landing at Grosse Isle the cases of minor infectious diseases found on board, as had been done since the year 1887, the steamers proceeded direct to Quebec and landed them there for transfer to the Immigration Hospital at Savard Park or to other city hospitals admitting such cases. The only persons now landed at Grosse Isle are those suffering from quarantinable diseases, with contacts; also passengers refusing vaccination and those that have to be deloused. No case of quarantinable disease was found on board any vessel during the season. Four steamers only stopped at Grosse Isle, these for the purpose of landing persons refusing vaccination or requiring to be deloused. These detentions at Grosse Isle numbered 59, divided as under:—

| | | Detention days |
|---|----|----------------|
| Landed for delousing..... | 47 | 47 |
| Landed for refusal of vaccination..... | 4 | 29 |
| Attendants or persons accompanying..... | 8 | 20 |
| Totals..... | 59 | 96 |

“There were 944 vessels cleared during the navigation season, being an increase of 82 over last year, and 41 more than were ever cleared during any one season previously. Of these, 186 were passenger steamers, being an increase of 44 as compared with the previous season. The passenger vessels were almost 20 per cent of the total number of vessels cleared.

“On most of the passenger vessels last season the ship's surgeons have been careful and conscientious in the discharge of their duties, and during the inspections your officers have not found many cases of disease that were not reported to them. In this respect there has been a decided improvement over former years.

“The passengers suffering from minor infectious diseases being no longer landed at Grosse Isle, the services of the quarantine boat *Alice* were not con-

stantly required here last season; she was consequently stationed at Quebec in the inner Louise Basin, under the care of three members of her crew, the remaining crew being stationed at Grosse Isle for work ashore.

"The old sailing yacht purchased in 1910 for service between the station and Montmagny was condemned last season and replaced by a new and larger one called *Jeannette*, capable of giving a better service than the old one.

"The members of the crew of the *Alice* while ashore occupied their time generally in keeping the property in a good state of repair."

Lawlor's Island, Halifax, N.S. (Acting Quarantine Officer, Dr. Judson V. Graham):—

"Owing to the passage to Lawlor's Island being blocked with ice, it was found necessary on February 1 to admit to the hospital at Rockhead two cases of measles with three members of the same family accompanying. Two of those accompanying, although they were disinfected, bathed and isolated on admission, developed the disease five days after admission, making four cases of measles treated at the Rockhead Hospital and one accompanying. There was no cross infection among those detained.

"No persons were vaccinated at quarantine excepting members of the quarantine staff.

"There were 32 vessels fumigated at this station during the year."

William Head, B.C. (Quarantine Officer, Dr. C. P. Brown):—

"It is worth noting that there has been an increase of 67 per cent in the number of vessels inspected over last year, which was 50 per cent greater than the year before. This year's larger number has been occasioned partly, of course, by the fact that clause No. 29 of the regulations has been in force against San Pedro, Cal., much of the year. The vaccination requirements were withdrawn on September 29, 1924, but the clause was again put into effect on November 7, 1924, to meet the outbreak of plague in the city of Los Angeles. At present Los Angeles is reporting from 40 to 50 cases of smallpox per week.

"The number of vessels quarantined was also due to the widespread prevalence of smallpox. The attached schedule shows that 55 per cent of all vessels arriving had bills of health noting quarantinable disease, all of these including smallpox. The epidemic of virulent smallpox at Hong Kong died out early in the year. San Pedro, or rather the city of Los Angeles, of which San Pedro is a part, was the only other port where it was epidemic, although present in practically all the cities on this coast. The three cases admitted to hospital originated one each in Seattle, Vancouver, and Esquimalt. They returned to us from Honolulu, the west coast of Vancouver island, and the Arctic ocean.

"Both pneumonic and bubonic plague were present in virulent epidemic form at Los Angeles, the first case about November 1, 1924, and the last about the middle of January, 1925. This brought forward the questions of rat-guarding and fumigation. All vessels from San Pedro, New Orleans, the whole of San Francisco bay including Oakland, and the Straits Settlements are required to rat-guard at British Columbia ports. This is enforced by the Board of Harbour Commissioners at Vancouver, the collectors of customs and excise elsewhere, assisted if needed by the Dominion Mounted Police as well as the provincial sanitary police. The station acts as adviser, notifying the port authorities of the arrival of any vessel from a plague-infected port. Dr. H. E. Young, the Provincial Medical Officer of Health, is also notified and co-operates in enforcing the regulations. Hong Kong and Shanghai have been entirely free of plague this year.

"Typhus has occurred twice at Los Angeles, one or two cases only each time. Cholera has not appeared at any of the Orient ports from which we get the bulk of traffic.

"Beginning September 24, 1924, the inspection of vessels at night, on request, was authorized by the department. Since that date approximately 202, or 54 per cent of all vessels arriving, have been inspected at night. Passenger boats supply special strong electric lights of the Mazda C 3 type, that give a white light for inspection of steerage passengers at night. This system is apparently working well.

"The C.G.S. *Modge*, under Captain Robertson and Mr. Tumilty, has at all times been ready for duty. The officers of the Canadian Naval Service at the Navy Yard, Esquimalt, have again this year kept the *Madge* under observation and superintended her docking and repairing.

"The school has operated most satisfactorily. There are fifteen scholars in attendance. The three candidates for entrance to high school last year were successful. One of them is now attending the Victoria high school.

"The Architect's Branch of the Department of Public Works has renewed the pole line and greatly improved the lighting. They have installed a ventilating fan in the power house, which we hope will make fumigating safer. They have supplied materials for routine repairs as carried out by our own staff, as well as the labour for extensive repairs to brickwork and roofs. The residence of the electrician, Mr. Cornwall, was damaged by fire on the evening of May 23, 1924. This has been repaired.

"The Engineering Branch of the Public Works Department did extensive repairs to the small wharf; also repaired the dolphin and breast piling at the large wharf."

QUARANTINE WORK IN EUROPE

With a view to further protecting Canada from the incoming from Europe of typhus fever, smallpox, or other quarantinable disease, part of the duties of the overseas Canadian Immigration Medical staff, with headquarters in London, England, has been a close inspection of the work done at the delousing and disinfecting plants at the ports of Antwerp and Danzig as regards European immigrants to Canada.

The following summary indicates the work supervised:—

| | |
|--|---------------|
| Emigrants deloused and examined..... | 6,440 |
| Emigrants rejected on account of live lice..... | 23 |
| Emigrants exempted from disinfection..... | 2,954 |
| Emigrants examined for vaccination..... | 9,394 |
| Baggage disinfected and examined..... | 5,737 pieces |
| Baggage exempted from disinfection and labelled..... | 11,165 pieces |

LEPER STATIONS

Tracadie, New Brunswick.—This leper station is situated in the county of Gloucester. Ten patients were under treatment during the year, six males and four females. This is the same number as reported last year; there were no new admissions or deaths during the twelve months' period. The oldest patient is 78, the youngest, 24. Seven are of French origin from Tracadie and neighbouring parishes, one is an Iclander, one Chinese, and one of French and Scotch descent. Of the ten patients, six are arrested cases; the remaining four are still active.

Dr. Langis, the medical officer in charge, reports a continuance of the treatment of the active cases by intramuscular injection of the ethyl esters of chaulmoogra oil, with as satisfactory results as can be expected.

Bentinck Island, British Columbia.—This leper station is situated about three miles from the quarantine station at William Head, and is under the supervision of the quarantine officers. At the close of the year there were nine patients under treatment, seven Chinese, one Russian Jew, and one Doukhobor. This number includes one Chinese patient who was released on parole the previous year as free from leprosy, but who had to be re-admitted to the lazaretto due to a recurrence of suspicious symptoms.

Dr. Brown reports that the same specific treatment continues to be administered, *i.e.*, chaulmoogra oil in capsules with the ethyl esters of the fatty acids derived therefrom, with 1 per cent of iodine added, injected intramuscularly. The condition of three of the patients is clinically negative; while these show the scars and results of former active disease, there is at present an absence of active signs or symptoms. The remaining six show the disease checked, but have recurring clinical symptoms such as old ulcers that occasionally break down.

The more easy accessibility of Bentinck Island to the William Head Quarantine Station, as compared with D'Arcy Island, the site of the old leper colony, enables the quarantine officers to give closer medical attention to the patients than hitherto. The lepers are housed in cottages, each with his own room and outfit. They do light work, if able; attend to their quarters, do their own cooking, cut their wood, keep gardens and chickens. Two male caretakers and a trained female nurse, the wife of one of the caretakers, are in charge on the island.

IMMIGRATION MEDICAL SERVICE

Ocean passengers, immigrant and non-immigrant, to the number of 109,928 were medically inspected at ports of Canada on the Atlantic and Pacific coasts during the fiscal year. In addition, 2,413 persons en route to Canada by way of the ports of New York and Boston were medically inspected by officers of the United States Public Health Service. The following table shows the monthly entry by ports:—

IMMIGRANTS AND NON-IMMIGRANTS MEDICALLY INSPECTED AT OCEAN PORTS

| 1924-25 | Quebec | | Halifax | | St. John | | Montreal | | Vancouver | | Victoria | | North Sydney | | Sydney | | New York and Boston | | Totals |
|----------------|--------|----------|---------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------------|----------|--------|----------|---------------------------|----------|---------|
| | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | |
| April..... | 4,863 | 190 | 7,512 | 245 | 4,439 | 210 | 33 | | 88 | 213 | 58 | 36 | 312 | 93 | 63 | 45 | 164 | 51 | 18,615 |
| May..... | 13,963 | 1,006 | 2,981 | 222 | 12 | 34 | 58 | 23 | 159 | 453 | 74 | 93 | 318 | 128 | 1 | 10 | 162 | 93 | 19,790 |
| June..... | 10,378 | 1,117 | 1,714 | 101 | 16 | 62 | 56 | 8 | 199 | 100 | 50 | 49 | 126 | 178 | | | 323 | 62 | 14,539 |
| July..... | 7,428 | 937 | 1,564 | 118 | 21 | 100 | 58 | 33 | 85 | 203 | 54 | 29 | 78 | 261 | | 1 | 71 | 82 | 11,123 |
| August..... | 9,378 | 1,978 | 1,308 | 145 | 9 | 53 | 55 | 13 | 77 | 95 | 21 | 21 | 64 | 241 | | 6 | 90 | 121 | 13,675 |
| September..... | 5,831 | 799 | 895 | 227 | 19 | 37 | 53 | 11 | 256 | 112 | 41 | 20 | 66 | 370 | | 3 | 88 | 99 | 8,927 |
| October..... | 4,894 | 828 | 424 | 86 | 7 | 39 | 62 | 15 | 73 | 92 | 32 | 17 | 46 | 211 | | | 231 | 45 | 7,102 |
| November..... | 3,070 | 321 | 1,360 | 117 | 123 | 44 | 49 | 7 | 39 | 67 | 22 | 1 | 29 | 163 | | | 147 | 40 | 5,599 |
| December..... | | | 606 | 115 | 1,198 | 142 | 17 | | 32 | 29 | 12 | 9 | 26 | 179 | | 3 | 139 | 38 | 2,605 |
| January..... | | | 375 | 106 | 697 | 118 | 4 | | 13 | 437 | 25 | 28 | 10 | 61 | | 5 | 80 | 51 | 2,210 |
| February..... | | | 705 | 104 | 571 | 156 | 1 | | 35 | 63 | 32 | 22 | 2 | 54 | 9 | 15 | 72 | 46 | 1,887 |
| March..... | | | 2,590 | 158 | 2,438 | 211 | | | 110 | 194 | 69 | 127 | 47 | 161 | 3 | 43 | 57 | 61 | 6,269 |
| Totals..... | 59,805 | 7,176 | 22,294 | 1,744 | 9,550 | 1,206 | 446 | 110 | 1,166 | 2,058 | 490 | 452 | 1,124 | 2,100 | 76 | 131 | 1,624 | 789 | 112,341 |

The following table shows the number of persons "certified" by immigration medical officers as prohibited under the Immigration Act:—

| Insane, Feeble-minded, etc. Section 3 (a) | Tuberculosis, loathsome or chronic infectious disease; Section 3 (b) | Dumb, blind, or otherwise physically defective; Section 3 (c) and (m) | Constitutional Psychopathic Inferiority; Section 3 (k) | Total "Certified" |
|---|--|---|---|----------------------|
| 22 | 38 | 819 | 3 | 882 |

Tables below show, by ports, the specific mental and physical diseases or defects for which these persons were medically certified:—

IMMIGRATION ACT, SECTION 3 (a) AND (k)—PERSONS MENTALLY DEFECTIVE

| Disability | Quebec | Halifax | St. John | Vancouver | Victoria | North Sydney | Totals |
|---|--------|---------|----------|-----------|----------|-----------------|--------|
| Section 3 (a)— | | | | | | | |
| Imbeciles..... | 2 | 1 | | | | | 3 |
| Feeble-minded..... | 1 | | 3 | | | 1 | 5 |
| Epileptics..... | 2 | | | | 1 | | 3 |
| Insane..... | 7 | 2 | | 2 | | | 11 |
| Section 3 (k) — | | | | | | | |
| Constitutional Psychopa- thic Inferiority..... | 2 | 1 | | | | | 3 |
| Totals..... | 14 | 4 | 3 | 2 | 1 | 1 | 25 |

IMMIGRATION ACT, SECTION 3 (b)—PERSONS AFFECTED WITH TUBERCULOSIS,
LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | Halifax | St. John | Mont- real | Van- couver | Victoria | North Sydney | Totals |
|------------------------|--------|---------|----------|---------------|----------------|----------|-----------------|--------|
| Chancroid..... | | | | | | 1 | | 1 |
| Favus of nail..... | | 1 | 1 | | | | | 2 |
| Favus of scalp..... | | | 1 | | | | | 1 |
| Gonorrhea..... | 3 | 1 | 1 | | | | | 5 |
| Ringworm of nail..... | | | 1 | | | | | 1 |
| Ringworm of scalp..... | 2 | | 1 | | | | | 3 |
| Sycosis barbae..... | 1 | 2 | | | | | | 3 |
| Syphilis..... | | | 1 | | | | | 1 |
| Trachoma..... | 6 | 9 | | | | | | 15 |
| Tuberculosis..... | 2 | 1 | | 1 | 1 | | 1 | 6 |
| Totals..... | 14 | 14 | 6 | 1 | 1 | 1 | 1 | 38 |

SECTION 3 (c) AND (m)—PERSONS PHYSICALLY DEFECTIVE

| Defects | Quebec | Halifax | St. John | Montreal | Vancouver | North Sydney | Totals |
|---------------------------------|--------|---------|----------|----------|-----------|-----------------|--------|
| Absence of members..... | 41 | 12 | 14 | | | 1 | 68 |
| Anaemia..... | 1 | 2 | | | | | 3 |
| Blindness, total or partial.... | 9 | 1 | | | | 2 | 12 |
| Blood vessels, defects of..... | 34 | 2 | 7 | | | | 43 |
| Chest, diseases of..... | 5 | | 1 | | | | 6 |
| Chilblain, chronic..... | | 1 | | | | | 1 |
| Chorea..... | 1 | | 1 | | | | 2 |
| Deafness..... | 43 | 4 | 6 | 1 | | | 54 |
| Deaf and dumb..... | 4 | 1 | 3 | | | | 8 |
| Debility..... | 6 | 6 | | | | | 12 |
| Deformities..... | 51 | 13 | 10 | | 1 | | 75 |
| Dermatitis..... | 2 | | | | | | 2 |
| Ear, diseases of..... | 8 | | | | | | 8 |
| Epileptiform, seizures..... | 1 | | | | | | 1 |
| Glandular conditions..... | 3 | | 2 | | | | 5 |
| Goitre..... | 6 | 1 | 3 | | | | 10 |
| Heart, diseases of..... | 42 | 1 | 11 | | | | 54 |
| Hernia..... | 26 | 7 | | | | | 33 |
| Jaundice..... | | 1 | | | | | 1 |
| Larynx, diseases of..... | 1 | | | | | | 1 |
| Loss of muscle tissue..... | | | 1 | | | | 1 |
| Loss of power of members.... | 137 | 10 | 20 | | | | 167 |
| Malaria..... | 6 | 1 | | | | | 7 |
| Nervous tremors..... | | | 1 | | | | 1 |
| Neurasthenia..... | | 1 | | | | | 1 |
| Obesity..... | | | 1 | | | | 1 |
| Paralysis..... | 5 | 2 | | | | | 7 |
| Poor physique..... | 9 | 2 | 2 | | | | 13 |
| Pregnancy, illegitimate..... | 1 | | | | | | 1 |
| Rheumatism..... | 12 | | 1 | | | | 13 |
| Sclerosis..... | 1 | | | | | | 1 |
| Senility..... | 2 | 16 | | | | 1 | 19 |
| Speech impediments of..... | 29 | | 6 | | | | 35 |
| Vision, defects of..... | 111 | 4 | 38 | | | | 153 |
| Totals..... | 597 | 88 | 128 | 1 | 1 | 4 | 819 |

The following table refers to ocean passengers (immigrant and non-immigrant) who, on arrival in Canada, were detained for medical or surgical treatment at the port named until they were cured or fit to travel (including minor infectious disease cases hitherto detained at the Grosse Isle Quarantine Station, but now treated at Savard Park Immigration Hospital, Quebec):—

| Treated for | Quebec | Halifax | St. John | Vancouver | Victoria | Totals |
|------------------------------|--------|---------|----------|-----------|----------|--------|
| Abortions..... | | 2 | | | | 2 |
| Abscess..... | 5 | 2 | | | | 7 |
| Appendicitis..... | | 2 | | | | 2 |
| Blepharitis..... | 1 | | | | | 1 |
| Bronchitis..... | 5 | 2 | | | | 7 |
| Broncho-pneumonia..... | 1 | 4 | 1 | | | 6 |
| Bronchial catarrh..... | | 1 | | | | 1 |
| Burns..... | | | 1 | | | 1 |
| Cellulitis..... | | | 4 | | | 4 |
| Chancroid..... | | | | | 1 | 1 |
| Childbirth..... | 3 | 1 | | | | 4 |
| Colic..... | | 2 | | | | 2 |
| Conjunctivitis..... | 12 | 4 | 1 | 1 | 4 | 22 |
| Contusion..... | | 2 | | | | 2 |
| Corneal ulcer..... | 2 | | | | | 2 |
| Coryza..... | 1 | | | | | 1 |
| Dermatitis..... | 3 | | | | | 3 |
| Dislocation..... | 1 | | | | | 1 |
| Dysentery..... | | 1 | | | | 1 |
| Eczema..... | 3 | | | | | 3 |
| Empyema..... | | | 1 | | | 1 |
| Epididymitis..... | 1 | 1 | | | | 2 |
| Food rash..... | 1 | | | | | 1 |
| Fractures..... | 3 | 1 | 1 | | | 5 |
| Gastric ulcer..... | 1 | | | | | 1 |
| Herpes labialis..... | 1 | | | | | 1 |
| Impetigo..... | 9 | 12 | 1 | | | 22 |
| Indigestion, acute..... | 1 | | | | | 1 |
| Influenza..... | 1 | 4 | 2 | | | 7 |
| Intestinal obstruction..... | | 1 | | | | 1 |
| Intestinal toxemia..... | 5 | | | | | 5 |
| Jaundice..... | | 2 | | | | 2 |
| Keratitis..... | 1 | | | | | 1 |
| Laceration..... | | 1 | | | | 1 |
| Laryngitis..... | 1 | | | | | 1 |
| Malaria..... | | 1 | | | | 1 |
| Mastitis..... | | | 1 | | | 1 |
| Measles..... | 10 | | | | | 10 |
| Miscarriage..... | 1 | | | | | 1 |
| Mumps..... | 2 | | | | | 2 |
| Nephritis..... | | 1 | | | | 1 |
| Orchitis..... | 1 | | | | | 1 |
| Pancreatitis..... | | | 1 | | | 1 |
| Periosteitis..... | 2 | | | | | 2 |
| Pharyngitis..... | 1 | | | | | 1 |
| Pleurisy..... | | 1 | | | | 1 |
| Pneumonia..... | 3 | | | | | 3 |
| Pyrexia..... | | 6 | | | | 6 |
| Rheumatic fever..... | | 1 | | | | 1 |
| Rheumatism..... | 3 | | | | | 3 |
| Ringworm..... | 1 | 1 | 2 | | | 4 |
| Scabies..... | 8 | | 3 | | | 11 |
| Scald..... | 1 | | | | | 1 |
| Scarlet fever..... | 5 | | | | | 5 |
| Sciatica..... | 1 | | | | | 1 |
| Sebaceous Cyst..... | | 1 | | | | 1 |
| Seborrhoea of scalp..... | 1 | | | | | 1 |
| Sprains..... | 1 | 1 | 1 | | | 3 |
| Synovitis..... | 1 | | 1 | | | 2 |
| Teething rash..... | 1 | | | | | 1 |
| Tonsillitis..... | 8 | 1 | | | | 9 |
| Trachoma cicatrization..... | 12 | | | | | 12 |
| Ulcerations..... | 3 | | | | | 3 |
| Urticaria..... | 1 | | | | | 1 |
| Vaccinia..... | 1 | | | | | 1 |
| Varicella (chicken-pox)..... | 9 | | | | | 9 |
| Vincent's angina..... | | | 1 | | | 1 |
| Totals..... | 138 | 59 | 22 | 1 | 5 | 225 |

Of the immigrant and non-immigrant ocean passengers detained for a closer medical examination than could be afforded during line inspection, on account of suspected mental or physical defects, the following number were respectively either (a) released as not coming within the "prohibited classes" set out in section 3 of the Immigration Act, or were (b) recorded as having minor defects only:—

(a) PERSONS DETAINED FOR MEDICAL OBSERVATION AND SUBSEQUENTLY RELEASED AS "NEGATIVE"

| Detained for | Quebec | Halifax | St. John |
|--------------------------------|--------|---------|----------|
| Observation appendicitis..... | | 1 | |
| Observation chest..... | 1 | | 3 |
| Observation childbirth..... | 1 | | |
| Observation epilepsy..... | 1 | | |
| Observation eyes..... | | 6 | 5 |
| Observation general..... | 9 | 11 | 6 |
| Observation kidneys..... | 1 | | |
| Observation mental..... | 16 | 4 | 4 |
| Observation measles..... | 7 | | |
| Observation mumps..... | 3 | | |
| Observation nails..... | 2 | 2 | |
| Observation scalp..... | 3 | 1 | |
| Observation scarlet fever..... | 2 | | |
| Observation skin..... | | 3 | |
| Observation urethritis..... | | 2 | |
| Observation varicella..... | 6 | | |
| Totals..... | 52 | 30 | 18 |

(b) CASES RECORDED FOR MINOR DEFECTS

| | |
|---------------|-----|
| Quebec..... | 484 |
| Halifax..... | 263 |
| St. John..... | 103 |
| Total..... | 850 |

IMMIGRATION MEDICAL WORK IN THE BRITISH ISLES AND IN EUROPE

When the Department of Health first took over the work of medically inspecting immigrants, the medical inspection was conducted exclusively at the Canadian ports of arrival. In the nature of the case this medical inspection is necessarily a more or less cursory one. In order to greater efficiency and as a primary line of defence in the elimination of the physically and mentally unfit, the policy has now been adopted of recommending prospective immigrants who have any doubt as to their physical or mental condition to present themselves for examination to a medical practitioner before taking active steps toward emigrating to Canada. Apart from its advantages to Canada, this procedure undoubtedly tends to reduce hardship in many cases to people who otherwise, on arrival in Canada, might be deported. The examining physician must be selected from an official roster which contains the names of some 2,000 doctors resident throughout Great Britain, Ireland, and at European ports who have authority to issue medical certificates. This roster of medical practitioners is now in general use by the Oversea Settlement Office of the British Government and by the immigration services of the overseas dominions. The cost of the medical examination is borne by the prospective emigrant, based on a reasonable scale of fees. In the case of unaccompanied women and Government-assisted passages to Canada, this medical examination is compulsory.

As a check upon the roster doctors, the certificates issued by them are submitted by the Immigration Department in London to Canadian medical

officers of the Department of Health, two of whom have been appointed in recent years. Where the diagnosis appears doubtful, a further medical report is requested, and in some instances it becomes necessary for the prospective immigrant to be re-examined by the departmental medical officer, whose advice is subsequently passed on to the Immigration Department. Thus a second line of elimination is built up.

The results of this system have been, (a) a steadily improving class of immigrants to Canada, and (b) a minimum number of persons rejected on mental or physical grounds after arrival at the Canadian port.

The following brief statement indicates the work performed during the fiscal year 1924-25:—

| | |
|---|--------------|
| Number of medical certificates reviewed during year..... | 24,832 |
| Number of prospective immigrants personally medically examined..... | 1,684 |
| Number of persons "certified" as belonging to the "prohibited classes", Immigration Act:— | |
| Section 3 (a), (k) and (m)—Mental defects..... | 155 |
| Section 3 (b)—Tuberculosis and loathsome diseases..... | 227 |
| Section 3 (c) and (m)—Physical defects..... | 1,772 |
| | <u>2,154</u> |

INSTRUCTIONS TO MEDICAL OFFICERS

During the fiscal year a booklet entitled "Instructions to Medical Officers" was published by the department. This is for use by officers of the Immigration Medical Service and by ships' medical officers, and makes for uniform and efficient medical inspection of immigrants in accordance with the requirements of the Immigration Act.

MARINE HOSPITALS SERVICE

During the year 1924-25 two marine hospitals at Sydney and Lunenburg were in operation. At larger ports, provided with hospital facilities, sick sailors were treated at local hospitals at fixed contract rates. At the smaller ports and outports unprovided with hospital facilities, the Department arranged with some suitable private or public residence. At all other ports best arrangements available were made under the instructions and by the authority of the collector of customs. The following is a list of the hospitals which were under contract in the year 1924-25:—

NOVA SCOTIA

| | |
|-------------------|---|
| Amherst..... | Highland View Hospital |
| Antigonish..... | St. Martha's Hospital |
| Bridgewater..... | Dawson Memorial Hospital |
| Glace Bay..... | St. Joseph's Hospital |
| Halifax..... | Victoria General Hospital |
| | City Health Board (Contagious diseases) |
| | Tuberculosis Hospital |
| Kentville..... | Nova Scotia Sanatorium (Tuberculosis) |
| Middleton..... | Soldiers' Memorial |
| New Glasgow..... | Aberdeen Hospital |
| North Sydney..... | Hamilton Memorial Hospital |
| Pictou..... | Pictou Memorial Hospital |
| Springhill..... | Springhill Cottage Hospital |
| Windsor..... | Payzant Memorial Hospital |
| Yarmouth..... | Yarmouth Hospital |

NEW BRUNSWICK

| | |
|------------------|---|
| Bathurst..... | James Dunn Hospital |
| Campbellton..... | Hôtel-Dieu |
| Chatham..... | Hôtel-Dieu |
| Moncton..... | Moncton Hospital |
| River Glade..... | Jordan Memorial Sanatorium (Tuberculosis) |
| St. John..... | General Public Hospital |
| | St. John County Hospital (Tuberculosis) |
| St. Stephen..... | Chipman Memorial |
| Tracadie..... | Hôtel-Dieu |

PRINCE EDWARD ISLAND

| | |
|--------------------|------------------------|
| Charlottetown..... | Charlottetown Hospital |
| Summerside..... | P.E.I. Hospital |
| | Prince County Hospital |

QUEBEC

| | |
|-------------------|--------------------------------------|
| Chicoutimi..... | Hôtel-Dieu |
| Lake Edward..... | Lake Edward Sanatorium (T.B.C.) |
| Levis..... | Hôtel-Dieu |
| Montreal..... | Montreal General |
| | Notre-Dame |
| | Hôtel-Dieu |
| | Royal Victoria (Contagious diseases) |
| | Alexandra (Contagious diseases) |
| | Grace Dart Home (T.B.C.) |
| Quebec..... | Hôtel-Dieu |
| | Jeffery Hale's Hospital |
| | Civic Hospital (Contagious diseases) |
| | Laval Hospital (T.B.C.) |
| Sorel..... | Hôpital Général |
| St. Jean..... | Hôpital St. Jean |
| Three Rivers..... | Hôpital St. Joseph |

BRITISH COLUMBIA

| | |
|----------------------|---|
| Anyox..... | Anyox General Hospital |
| Chemainus..... | General Hospital |
| Cumberland..... | General Hospital |
| Duncan..... | King's Daughters' Hospital |
| Ladysmith..... | General Hospital |
| Nanaimo..... | General Hospital |
| New Westminster..... | St. Mary's Hospital |
| Ocean Falls..... | Ocean Falls Hospital |
| Port Alberni..... | West Coast General Hospital |
| Powell River..... | St. Luke's Hospital |
| Prince Rupert..... | Prince Rupert General Hospital |
| Tranquille..... | Tranquille Sanatorium (T.B.C.) |
| Vancouver..... | St. Paul's Hospital |
| Victoria..... | St. Joseph's Hospital |
| | Royal Jubilee Hospital |
| | City Isolation Hospital (Contagious diseases) |

Emergency hospitals were operated at the following ports:—

Nova Scotia.—Arichat, Canso, Liverpool, Lockport, Louisburg, Shelburne.

Prince Edward Island.—Souris.

Quebec.—Port Alfred.

Although no outbreak of minor or major contagious diseases occurred during the year, there has been a large increase in the shipping activities on both the Atlantic and Pacific coasts, as instanced by the increase in the amount of sick mariners' dues collected during the period, which was \$11,868.80. Consequently the number of sick and injured mariners was increased proportionately.

The total number of sick, injured and distressed mariners for the year 1924-25 was 3,649, as compared with 2,745 for the year 1923-24, or an increase of 904 seamen. This increase had not been anticipated, and consequently the amount of \$120,000 voted by Parliament to cover the expenditure for the year was insufficient, and a Governor General's warrant for \$25,000 had to be secured. This additional amount, however, was not sufficient to cover the entire expenditure and approximately \$11,000 will have to be paid out of the appropriation for the year 1925-26.

As regards the days of treatment at hospitals and private residences, etc., the total was 36,185, as compared with 32,679 for the year 1923-24, or an increase of 3,506 days.

During the year the department lost the services, by death, of the following port physicians: Dr. M. Dodd, Glace Bay, and Dr. J. S. C. MacKay of Windsor. With these two exceptions, there has been very little change in the personnel of the service. Some necessary repairs and improvements were made at the two hospitals operated by this department at Sydney and Lunenburg.

The policy adopted by the service a few years ago in providing mariners suffering from incipient tuberculosis with proper sanatorium treatment has been found very beneficial and has been commented upon very favourably by the shipping companies. With regard to the matter of tuberculosis, the service has also made arrangements to take more efficient care of those in the advanced stage, in the manner of having these cases transferred to hospitals devoted exclusively to the treatment of such advanced cases.

STATEMENT OF DISEASES AND INJURIES TREATED DURING THE YEAR 1924-25

| | | |
|--|-----|-------|
| <i>General Diseases</i> | | 674 |
| Measles..... | 4 | |
| Diphtheria..... | 1 | |
| Small-pox..... | 4 | |
| Scarlatina..... | 1 | |
| Mumps..... | 3 | |
| Erysipelas..... | 10 | |
| Typhoid fever..... | 18 | |
| Para-typhoid..... | 3 | |
| Cholera..... | 2 | |
| Tuberculosis..... | 46 | |
| Malaria..... | 16 | |
| Scabies..... | 1 | |
| Syphilis..... | 125 | |
| Gonorrhoea..... | 140 | |
| Alcoholism..... | 4 | |
| Diabetes..... | 11 | |
| Beri-beri..... | 3 | |
| Rheumatism..... | 74 | |
| Gout..... | 1 | |
| Anæmia..... | 3 | |
| New growths—malignant..... | 6 | |
| “—non-malignant..... | 10 | |
| Malformation..... | 3 | |
| Cyst..... | 11 | |
| General debility..... | 8 | |
| Neurasthenia..... | 12 | |
| Ptomaine..... | 4 | |
| Shock..... | 1 | |
| Hemophilia..... | 1 | |
| Influenza..... | 148 | |
| <i>Local Diseases</i> | | 1,774 |
| Diseases of the Nervous System..... | | 100 |
| 1. Of the nerves..... | 17 | 17 |
| Neuritis..... | 17 | |
| 2. Of the spinal cord and membranes..... | | 1 |
| Degeneration of lateral column..... | 1 | |
| 3. Of brain and membranes..... | | |
| 4. Functional and other nervous diseases, etc..... | | 82 |
| Hemiplegia..... | 1 | |
| Paralysis..... | 7 | |
| Epilepsy..... | 6 | |
| Congestion brain..... | 1 | |
| Vertigo..... | 1 | |
| Neuralgia..... | 19 | |
| Hemorrhage..... | 4 | |
| Headache..... | 7 | |
| Hysteria..... | 3 | |
| Delirium tremens..... | 1 | |
| Myalgia..... | 20 | |
| Dementia præcox..... | 2 | |
| Melancholia..... | 3 | |
| Insomnia..... | 5 | |
| Stroke..... | 2 | |
| Diseases of the eye..... | | 48 |
| Conjunctivitis..... | 36 | |
| Ulcer cornea..... | 2 | |
| Iritis..... | 5 | |
| Pan-ophthalmitis..... | 2 | |
| Trachoma..... | 1 | |
| Keratitis..... | 1 | |
| Cataract..... | 1 | |
| Diseases of the ear..... | | 46 |
| Cerumen..... | 13 | |
| Otitis media..... | 26 | |
| Mastoiditis..... | 1 | |
| Deafness..... | 5 | |
| Otalgia..... | 1 | |

STATEMENT OF DISEASES AND INJURIES, &c.—Continued

| | | |
|---|-----|-----|
| Diseases of the nose..... | | 17 |
| Rhinitis..... | 1 | |
| Abscess..... | 1 | |
| Coryza..... | 8 | |
| Diseases of the Circulatory System..... | | 48 |
| Heart disease (Valvular)..... | 17 | |
| Tachycardia..... | 2 | |
| Arterio-sclerosis..... | 4 | |
| Varicose veins..... | 15 | |
| Phimosis..... | 2 | |
| Aortitis..... | 1 | |
| Endocarditis..... | 4 | |
| Angina pectoris..... | 1 | |
| Septicæmia..... | 1 | |
| Cerebral embolism..... | 1 | |
| Diseases of the Respiratory System..... | | 249 |
| Bronchitis..... | 104 | |
| Tonsilitis..... | 60 | |
| Pneumonia..... | 23 | |
| Broncho-pneumonia..... | 2 | |
| Laryngitis..... | 4 | |
| Congestion lungs..... | 13 | |
| Pleurisy..... | 23 | |
| Asthma..... | 16 | |
| Hemorrhage lungs..... | 1 | |
| Empyema..... | 1 | |
| Abscess lungs..... | 1 | |
| Gassed..... | 1 | |
| Diseases of the Digestive System..... | | 544 |
| Dental Caries..... | 55 | |
| Toothache..... | 44 | |
| Cancrum oris..... | 2 | |
| Alveolar abscess..... | 2 | |
| Quinsy..... | 7 | |
| Pharyngitis..... | 9 | |
| Ulcerated stomach..... | 2 | |
| Gastritis..... | 70 | |
| Indigestion..... | 41 | |
| Gingivitis..... | 3 | |
| Pyorrhœa..... | 9 | |
| Fistula..... | 3 | |
| Hemorrhoids..... | 21 | |
| Splenic congestion..... | 1 | |
| Appendicitis..... | 81 | |
| Colitis..... | 8 | |
| Jaundice..... | 11 | |
| Diarrhœa..... | 15 | |
| Constipation..... | 17 | |
| Hepatitis..... | 4 | |
| Hernia..... | 81 | |
| Dysentery..... | 7 | |
| Enteritis..... | 20 | |
| Dyspepsia..... | 11 | |
| Hepatic colic..... | 5 | |
| Gastro-enteritis..... | 6 | |
| Intestinal obstruction..... | 1 | |
| Cholecystitis..... | 5 | |
| Peritonitis..... | 1 | |
| Abdominal adhesions..... | 2 | |
| Diseases of the Lymphatic System..... | | 9 |
| Adenitis..... | 9 | |
| Diseases of the Urinary System..... | | 57 |
| Nephritis..... | 12 | |
| Bright's diseases..... | 2 | |
| Renal colic..... | 4 | |
| Peri-nephritic abscess..... | 1 | |
| Cystitis..... | 17 | |
| Phosphaturia..... | 1 | |
| Pyuria..... | 1 | |
| Prostatitis..... | 6 | |
| Pyonephrosis..... | 1 | |
| Renal calculus..... | 5 | |
| Uraemia..... | 2 | |
| Hematuria..... | 4 | |
| Enuresis..... | 1 | |
| Diseases of the Generative System..... | | 97 |
| Urethritis..... | 28 | |
| Balanitis..... | 3 | |
| Stricture..... | 11 | |

STATEMENT OF DISEASES AND INJURIES, &c.—*Continued*

| | | |
|--|-----|-------|
| <i>Diseases of the Generative System—Concluded</i> | | |
| Phimosiis..... | 1 | |
| Chancroids..... | 16 | |
| Varicocele..... | 9 | |
| Hydrocele..... | 5 | |
| Orchitis..... | 14 | |
| Epididymitis..... | 10 | |
| <i>Diseases of the Organs of Locomotion.....</i> | | 136 |
| Osteitis..... | 1 | |
| Sciatica..... | 8 | |
| Lumbago..... | 36 | |
| Osteo-mylitis..... | 5 | |
| Ant. poliomyelitis..... | 3 | |
| Bursitis..... | 19 | |
| Sinusitis..... | 6 | |
| Periostetitis..... | | |
| Synovitis..... | 13 | |
| Arthritis..... | 41 | |
| Necrosis..... | 2 | |
| Myositis..... | 2 | |
| <i>Diseases of the Connective Tissues.....</i> | | 219 |
| Cellulitis..... | 151 | |
| Abscess..... | 68 | |
| <i>Diseases of the Skin.....</i> | | 204 |
| Carbuncle..... | 18 | |
| Boils..... | 57 | |
| Eczema..... | 33 | |
| Acne..... | 1 | |
| Scabies..... | 13 | |
| Herpes..... | 7 | |
| Urticaria..... | 5 | |
| Dermatitis..... | 17 | |
| Ulcers..... | 33 | |
| Whitlow..... | 7 | |
| Impetigo..... | 2 | |
| Psoriasis..... | 5 | |
| Anthrax..... | 2 | |
| Tinea..... | 1 | |
| Sycosis..... | 1 | |
| Aloepaacia..... | 1 | |
| Ringworm..... | 1 | |
| <i>Injuries.....</i> | | 1,021 |
| <i>General Injuries.....</i> | | 103 |
| Multiple injuries..... | 32 | |
| Burns and scalds..... | 71 | |
| <i>Local injuries.....</i> | | 918 |
| Injuries face..... | 26 | |
| Fractured nose..... | 3 | |
| Contusions..... | 28 | |
| Injuries upper extremities..... | 14 | |
| Injuries eyes..... | 20 | |
| Injuries head..... | 40 | |
| Injuries throat..... | 4 | |
| Fractured skull..... | 3 | |
| Fractured ribs..... | 38 | |
| Injuries chest..... | 8 | |
| Injuries scalp..... | 7 | |
| Fractured leg..... | 12 | |
| Fracture tibia and fibula..... | 13 | |
| Fracture femur..... | 4 | |
| Fracture tibia..... | 11 | |
| Fracture fibula..... | 3 | |
| Fracture spine..... | 3 | |
| Fracture foot..... | 11 | |
| Fracture patella..... | 3 | |
| Fracture maxillary..... | 6 | |
| Fracture radius..... | 8 | |
| Fracture metacarpal..... | 7 | |
| Fracture toes..... | 5 | |
| Fracture sacrum..... | 1 | |
| Fracture fingers..... | 6 | |
| Fracture arm..... | 11 | |
| Injured fingers..... | 106 | |
| Injured ankle..... | 12 | |
| Injuries lower extremities..... | 23 | |
| Injured arm..... | 10 | |
| Injured abdomen..... | 9 | |
| Dislocated hand..... | 2 | |

STATEMENT OF DISEASES AND INJURIES, &c.—*Concluded*Local Injuries—*Concluded*

| | |
|--------------------------|----|
| Dislocated shoulder..... | 11 |
| Dislocated elbow..... | 2 |
| Dislocated arm..... | 1 |
| Fracture wrist..... | 2 |
| Injured back..... | 23 |
| Sprained neck..... | 2 |
| Sprained hip..... | 1 |
| Sprained back..... | 12 |
| Sprained knee..... | 4 |
| Sprained elbow..... | 4 |
| Sprained ankle..... | 18 |
| Sprained shoulder..... | 5 |
| Injured side..... | 23 |
| Injured leg..... | 28 |
| Injured spine..... | 4 |
| Injured knee..... | 21 |
| Sprained arm..... | 2 |
| Sprained wrist..... | 6 |
| Fatigue..... | 1 |
| Fracture scapula..... | 2 |
| Strained foot..... | 2 |
| Stab wounds..... | 3 |
| Gun-shot wounds..... | 1 |
| Frost bites..... | 4 |
| Injured shoulder..... | 8 |
| Injured toes..... | 6 |
| Injured foot..... | 37 |
| Foreign body throat..... | 1 |
| Foreign body finger..... | 1 |
| Injured hand..... | 73 |
| Injured thigh..... | 8 |
| Foreign body eye..... | 24 |
| Malingering..... | 7 |
| Observation..... | 9 |
| No diagnosis..... | 38 |
| Examination..... | 67 |

| | |
|-----------------------|-------|
| General Diseases..... | 674 |
| Local Diseases..... | 1,774 |
| General Injuries..... | 103 |
| Local Injuries..... | 918 |
| Total..... | 3,469 |

DIVISION OF VENEREAL DISEASE CONTROL

The venereal disease campaign conducted throughout Canada by Dominion and Provincial Governments was continued during the past year. The clinics have been augmented by the inclusion of a number of secondary treatment centres in the province of Quebec. The clinics are distributed throughout the country as follows:—

| | |
|-----------------------|----|
| Nova Scotia..... | 5 |
| New Brunswick..... | 8 |
| Quebec..... | 10 |
| Ontario..... | 17 |
| Manitoba..... | 4 |
| Saskatchewan..... | 6 |
| Alberta..... | 4 |
| British Columbia..... | 2 |

There are additional centres for examination and treatment in general hospitals, women's hospitals, children's hospitals, maternity hospitals, health centres, child welfare clinics, maternity clinics, day nurseries, etc.

In remote districts treatment is arranged for with the local physician or, in the absence of a physician, the patient is brought to a treatment centre without charge. For delinquents treatment is provided in reformatories, jails and penitentiaries. All prisoners, male and female, are given a compulsory examination and treatment enforced if necessary. As the latter are so largely responsible for the spread of venereal disease this measure of compulsion has been

found necessary and has proven to be very effective in reducing the case incidence. The number of cases under treatment and reported by physicians during the year were as follows:—

| | |
|------------------------------------|--------|
| Under treatment in clinics..... | 13,967 |
| Under treatment by physicians..... | 15,754 |
| Total..... | 29,721 |

It will be seen that the number of cases under treatment in clinics and reported by physicians from year to year is practically the same. These figures do not represent the total number of venereal diseases in the community. The number of cases reported by physicians is far below the actual number under treatment. It is well known that physicians do not report their cases fully. The number of unknown cases, it is believed, are in excess of the known cases.

The number of treatments was 369,016 and the total number of laboratory examinations 60,339. The approximate cost of each treatment and laboratory examination was seventy-five cents (.75). This figure is very low especially when one considers that there were given 82,186 injections of salvarsan and that the cost of the ampoule of salvarsan for each injection is approximately sixty cents (.60).

As regards the number of cases cured, it is not possible to draw any definite conclusions.

The Dominion venereal disease grant was reduced from \$200,000 to \$150,000. This reduction did not appear to make any appreciable difference in the efficacy of the work. The allotment of the grant was as follows:—

| | |
|--------------------------------------|-------------|
| Department of Health..... | \$ 7,500 00 |
| Canadian Social Hygiene Council..... | 7,500 00 |
| Alberta..... | 9,052 26 |
| British Columbia..... | 8,069 71 |
| Manitoba..... | 9,385 52 |
| New Brunswick..... | 5,966 74 |
| Nova Scotia..... | 8,058 25 |
| Ontario..... | 45,128 86 |
| Prince Edward Island..... | 1,363 18 |
| Quebec..... | 36,322 61 |
| Saskatchewan..... | 11,652 87 |

During the year there was a diminution in the number of requests for lectures and literature, which was general throughout the country. During the first years of the campaign there was a constant demand for educational material for lectures, films and literature.

The educational activities of this department were confined to lectures for young men and the distribution of literature. It is being realized more and more that the responsibility of giving children knowledge that may be helpful to them belongs to parents.

In the United States the question of the continuation of free treatment has been given considerable study, with the result that at a meeting of venereal disease control officers of the State Health Departments and the United States Public Health Service held at Hot Springs, Arkansas, on December 1, 2 and 3, 1924, the following resolution was passed:—

"That no clinic supported by Federal or State Tax funds in whole or in part, should treat patients who are able to pay."

During the year the advisability of doing Wassermann and G. C. smears upon immigrants entering the country again came up for consideration. This problem has been thoroughly discussed on numerous occasions and its impracticability has been amply demonstrated.

Law enforcement, which is now confined in great measure to enforced examination and compulsory treatment of male and female prisoners, is being

satisfactorily carried out throughout the country. This measure has proven helpful in reducing the incidence of venereal disease, especially in the large cities.

Successful follow-up work has been carried on in varying degree in the different provinces. No other part of the work of venereal disease control is quite so difficult, for, apart from the question of funds, there is the fact that patients give false names and false addresses, frequently move from place to place and even leave the country, which makes it quite impossible for the authorities to trace them. The co-operation of the police is usually sought only in case of delinquents who are known spreaders of venereal disease.

The question of a medical certificate as a prerequisite to marriage as a prevention of marital infection was persistently urged during the past year. There is no doubt that a general medical examination before marriage would prove beneficial. Not only would it help prevent the dissemination of venereal diseases and hereditary defects due to the marriage of mental defectives, but in addition would give candidates for marriage an idea of their general health and fitness for marriage. That this examination should be compulsory is debatable.

On the whole the work of venereal disease control was carried on as effectively as during previous years and has no doubt helped to materially reduce the incidence and control the spread of the venereal diseases.

HOSPITALIZATION AND SANITATION

HOSPITALIZATION

Standard plans and data for contagious diseases hospitals covering practice, planning and equipment, were furnished at the request of the Government of Bermuda, the information being based on the hospitals of the federal quarantine service.

The Canadian Public Health Journal was furnished with a paper under the caption of "The Modern Hospital for Treatment of Contagious Diseases" for the purpose of disseminating information upon modern planning, etc., for such hospitals.

Actuated by the demand for educational data, including plans, etc., covering small community hospitals a publication entitled "Planning of Small Community Hospitals" was prepared and distributed to every municipality, hospital, architect, and public library, throughout the Dominion. The urgency for this publication was emphasized by the Dominion Council of Health, women, labour and farmer organizations.

The information given in the brochure it was anticipated would meet the requirements of the different municipalities throughout the Dominion, but it is to be noted that still further information and advice is sought on hospital accommodation by the smaller communities, such as those of 100 population embracing an outlying area of about 200 square miles, with approximately 1,000 rural population. These communities experience great difficulty in securing a medical doctor to locate within the community.

The division tentatively advised upon a scheme for the building of a small hospital at Pangnirtung, Baffin Land, N.W.T., for the Northwest Territories Branch, Department of the Interior, which it is proposed to use for the treatment of the Esquimos and also white officials engaged on government duties in that district. Close attention was given to the insulation of this building for the purpose of conserving fuel and at the same time maintaining efficiency.

There is a demand for information covering buildings for the institutional care of mental defectives and the division is concentrating its activities in the procurement of such data, together with plans which will be distributed at a later date to those interested in such phase of hospitalization.

SANITATION

Numerous inquiries upon water supplies, sewage treatment and disposal have been dealt with during the year, and this phase of the activities of the division has considerably increased since the publications covering such subjects were distributed.

There was evinced a great interest in the subject of sanitation for camps organized by various associations such as Y.W.C.A., Y.M.C.A., and Boy Scouts, and private and municipal camps for tourists. It is a safe indication that sincere efforts are being made to improve some of the undesirable sanitary conditions which have obtained in the past throughout the Dominion.

Interchange of publications with other dominions has brought ready response from Australia, New Zealand, South Africa and British West Indies, being expressive of much interest in the information contained in publications Nos. 1, (Sanitation, Sewage Treatment); 17, (Sanitation, Water Supplies); 34, (Small Community Hospitals). The editor of *The Monthly Review of the League of Red Cross Societies*, published in Paris, has expressed the desire to have extracts of these publications distributed from Paris in English, French and Spanish for use throughout the different countries.

Another interesting phase of the value of the publications is that of the request made by the professors of science, University of Toronto, to be furnished with copies of the publications for use of students attending university courses.

Interest in purification and filtration of municipal water supplies is rapidly increasing and requests were received to furnish advice as to suitability of types of purification and filtration plants for different localities.

The question of zoning now being practised so largely in other countries, particularly the United States and Great Britain, has rendered it incumbent for the Division to advise thereon from the point of view of health of the people. Standard by-laws for such practice have been submitted to the department and advice given thereon, having in mind that such by-laws could be used as skeleton frame work for the compilation of legislation suitable for the different municipalities throughout the Dominion.

NARCOTIC DIVISION

During the past year there has been a very marked improvement in the narcotic drug situation throughout the Dominion. This can be attributed to the aggressive policy adopted by the various police organizations throughout the country towards the suppression of this very great evil. The severe penalties imposed under the law on offenders has also had a very deterrent effect.

While the improvement is general throughout all provinces, it is particularly noticeable in the larger centres such as Vancouver, Winnipeg, Toronto and Montreal. This improvement should be even more marked during the coming year in view of the international agreement concluded at the second opium conference which was held at Geneva in November, 1924, under which the Powers concerned agreed to exercise more strict control over the manufacture, sale and distribution of the various salts and alkaloids of opium, such as morphine, heroin and also cocaine; and the adoption of the licensing system with regard to the import and export of such drugs.

TABLE 1.—NUMBER OF CONVICTIONS BY PROVINCES, FOR THE FISCAL YEAR ENDED MARCH 31, 1925 (FEDERAL PROSECUTIONS)

| Province | Doctors | Druggists | Veterinary Surgeons | Illicit Dealers | Chinamen |
|--|---------|-----------|---------------------|-----------------|----------|
| British Columbia, not including Vancouver..... | | | | 2 | 85 |
| Vancouver..... | | | | | 5 |
| Alberta..... | 1 | | 1 | 7 | 12 |
| Saskatchewan..... | | | 1 | 11 | 7 |
| Manitoba..... | 1 | | | 4 | |
| Ontario, not including Toronto..... | 1 | 1 | | 3 | 9 |
| Toronto..... | | | | 2 | 4 |
| Quebec, not including Montreal..... | | | | | |
| Montreal..... | | 2 | | 43 | 65 |
| New Brunswick..... | | 1 | | | |
| Nova Scotia..... | | | | | |
| Prince Edward Island..... | | | | | |
| | 3 | 4 | 2 | 72 | 187 |

A total of 268 convictions.

TABLE 2.—TOTAL NUMBER OF LICENSES ISSUED DURING THE FISCAL YEAR ENDED MARCH 31, 1925

| | |
|--|-----|
| Import licenses..... | 234 |
| Export licenses..... | 61 |
| Wholesale druggists' licenses..... | 111 |
| Retail druggists' licenses to manufacture..... | 45 |

TABLE 3.—Amount of Narcotics imported into Canada under the licensing system, which became effective in the year 1919, during the fiscal years ended March 31, 1919-1925, inclusive

| | Cocaine | Morphine | Crude Opium |
|-----------|---------|----------|-------------|
| | Ozs. | Ozs. | Pounds |
| 1919..... | 12,333 | 30,087 | 34,262 |
| 1920..... | 6,968 | 28,198 | 13,626 |
| 1921..... | 3,310 | 12,124 | 2,953 |
| 1922..... | 2,952 | 8,774 | 1,700 |
| 1923..... | 3,330 | 10,998 | 1,373 |
| 1924..... | 1,561 | 7,092 | 845 |
| 1925..... | 1,589 | 7,424 | 655 |

NOTE:—Morphine includes Diacetylmorphine (Heroin).

In addition to the amount of narcotics imported during the twelve months ended March 31, 1925, the following amounts of narcotics seized for infractions of the Customs Act, and the Opium and Narcotic Drug Act were disposed of by the Department of Health and the Department of Customs and Excise to the trade.

TABLE 4

| Drug | By Customs and Excise | By Department of Health | Total |
|----------------------|-----------------------|-------------------------|-------------------|
| Cocaine..... | 273 ozs. | 108 ozs. 261 grs. | 381 ozs. 261 grs. |
| Morphine..... | 223 ozs. | 41 ozs. 327 grs. | 269 ozs. 327 grs. |
| Heroin..... | 403 ozs. | | 403 ozs. |
| Opium (gum)..... | 94 lbs. | 75 lbs. | 169 lbs. |
| Opium (smoking)..... | | 55 tins | 55 tins |

NOTE:—Smoking Opium purchased for morphine content.

This compares with similar drugs disposed of by the departments concerned during the year ended March 31, 1924, as follows: Cocaine, 707 ounces. Morphine, including Diacetylmorphine (Heroin), 2,261 ounces. Crude Opium, 211 pounds.

TABLE 5.—Summary of Narcotics Exported from Canada during the fiscal year ended March 31, 1925

| Drug | Destination | Quantity |
|---------------------|-------------------|---------------------|
| Cocaine..... | Newfoundland..... | 1 oz. 310 grs. |
| * "..... | Germany..... | 100 ozs. |
| "..... | New Zealand..... | 4 ozs. 252 grs. |
| Morphine..... | Newfoundland..... | 24 ozs. 205 grs. |
| ** "..... | England..... | 3,721 ozs. 180 grs. |
| "..... | Argentina..... | 1 oz. 356 grs. |
| Codeine..... | Newfoundland..... | 3 ozs. 101 grs. |
| Heroin..... | Newfoundland..... | 275 grs. |
| Powdered Opium..... | Newfoundland..... | 69 ozs. 438 grs. |

*Returned to Germany, as this shipment was rejected by the consignee, the quality not up to standard.

**Returned to England by the Department of Customs and Excise.

PREPARATIONS CONTAINING NARCOTICS

| | | |
|---------------------------------------|--------------|--------------|
| Tr. Opium..... | Newfoundland | 1,152 ozs. |
| Asparoline..... | " | 904 ozs. |
| Chlorodyne..... | " | 30 ozs. |
| F. E. Camph. Co. | " | 144 ozs. |
| Elix. Terpin Hyd. DiaMorph..... | " | 1,416 ozs. |
| Hypno Bromic Co..... | " | 328 ozs. |
| Syr. Sanguinaria Co..... | " | 80 ozs. |
| " Cocillana Co..... | " | 59 ozs. |
| " Bronchial Co..... | " | 590 ozs. |
| White Pine and Tar with Morphine..... | " | 754 ozs. |
| Dover Powder..... | " | 16,400 tabs. |
| Lead with Opium..... | " | 13,300 pills |

TABLE 6.—Number of Aliens deported from Canada, having been convicted of offences under the Opium and Narcotic Drug Act, as from June 28, 1922, when the amendment to the Act came into force, to January 1, 1925.

| | |
|-----------------------------|-----|
| Chinese..... | 208 |
| United States citizens..... | 54 |
| French..... | 2 |
| English..... | 2 |
| Greek..... | 2 |
| Italian..... | 3 |
| Irish..... | 1 |
| Philippino..... | 1 |
| Japanese..... | 1 |
| Total..... | 274 |

TABLE 7.—Showing amount of Narcotic Drugs and Opium Smoking Paraphernalia seized by the Federal, Provincial and Municipal Police, during the calendar year 1924

| | | | |
|---|---------|----------|----------|
| <i>Opium—</i> | | | |
| Crude Opium..... | 75 lbs. | 8 ozs. | 209 grs. |
| Tins of Opium, (partly full) 204 contg..... | 41 lbs. | 5 ozs. | 351 grs. |
| Opium Seconds (Yenshee)..... | 7 lbs. | 8 ozs. | 304 grs. |
| *"Decks" of Opium..... | 583 | | |
| <i>Morphine</i> | | 43 ozs. | 250 grs. |
| "Decks" of Morphine..... | 218 | | |
| Tablets of Morphine..... | 539 | | |
| <i>Cocaine</i> | | 280 ozs. | 30 grs. |
| "Decks" of Cocaine..... | 1,020 | | |
| Tablets of Cocaine..... | 77 | | |
| <i>Heroin</i> (Diacetylmorphine)..... | | 29 ozs. | 113 grs. |
| "Decks" of Heroin..... | 2 | | |
| Tablets of Heroin..... | 26 | | |

TABLE 7—Concluded

| | | | | |
|--|-----|-----|---------|---------|
| <i>Drugs (Miscellaneous) including Morphine, Heroin and Cocaine—</i> | | | | |
| 65 bottles containing..... | | | 83 ozs. | 12 grs. |
| "Decks" of drugs..... | 479 | | | |
| * "Deck" is a small package containing 3 to 5 grains. | | | | |
| <i>Paraphernalia—</i> | | | | |
| Opium lamps..... | | 95 | | |
| Opium smoking pipes..... | | 110 | | |
| Opium scales..... | | 35 | | |
| Pipe heads..... | | 61 | | |
| Pipe scrapers..... | | 43 | | |

TABLE 8.—Showing the amount of Narcotics seized by the Department of Customs and Excise during the calendar year 1924

| Place | Date | Nationality | Goods |
|-----------------------|------------------|-----------------|---------------------|
| Vancouver..... | Jan. 12, 1924.. | Chinaman..... | 20 tins Opium |
| Vancouver..... | Jan. 12, 1924.. | Chinaman..... | 13 jars Opium |
| Vancouver..... | April 9, 1924.. | Chinaman..... | 159 jars Opium |
| Vancouver..... | April 17, 1924.. | Chinaman..... | 274 tins Opium |
| Vancouver..... | April 22, 1924.. | Chinaman..... | 180 tins Opium |
| | | | 34 jars Opium |
| | | | 1 pc. gum Opium |
| Vancouver..... | April 23, 1924.. | Chinaman..... | 105 tins Opium |
| St. Johns, Que..... | May 7, 1924.. | Unknown..... | 2 lbs. Cocaine |
| Victoria..... | April 28, 1924.. | Chinaman..... | 4 tins Opium |
| New Glasgow, N.S..... | June 9, 1924.. | Chinaman..... | 695 grains Opium |
| Vancouver..... | Aug. 3, 1924.. | Chinaman..... | 1 tin Opium |
| Vancouver..... | Sept. 2, 1924.. | Chinaman..... | 40 jars Opium |
| Vancouver..... | Sept. 25, 1924.. | Chinaman..... | 4 tins Opium |
| | | | 8 jars Opium |
| | | | 12 ozs. gum Opium |
| Emerson, Man..... | July 5, 1924.. | Unknown..... | 1 tin morphine |
| Chatham..... | Oct. 22, 1924.. | Chinaman..... | 19 tins opium |
| Vancouver..... | Nov. 17, 1924.. | Chinaman..... | 105 tins Opium |
| Montreal..... | Nov. 28, 1924.. | Russian Jew.... | 123½ lbs. gum Opium |

PROPRIETARY OR PATENT MEDICINE DIVISION

Under the Proprietary or Patent Medicine Act, 642 new medicinal preparations were registered and a total of 6,724 reviewed and licensed during the year.

The examination was made of labels, wrappers, advertisements and other literature used on the remedies put up by 462 different manufacturers, resulting in approximately 75 per cent of this material having to be revised to meet the requirements of the Act.

Of the preparations submitted to the department for registration, 103 were rejected. Of this number 22 were found to be medicated insufficiently to prevent their use as alcoholic beverages. The information printed on the containers of 30 others indicated that the preparations were for the use of doctors only, and were therefore, not in the class of medicines which could be taken by the general public without medical supervision. The balance was classified as toilet articles, venereal disease medicines, veterinary medicines, preparations designed for illegal purposes and absolute frauds.

Seventeen medicines were found on analysis to be deficient in medication; 4,431 packages were seized. Penalties applied varied from the destruction of seized goods to the cancellation of registration and voluntary payment of expenses incurred by the department.

Manufacturers of preparations recommended as specifics for certain diseases or claimed to be of value in the treatment of diphtheria, were required to modify the statements printed on the labels or wrappers. It is held by the department

that the sale of these products is detrimental to the public health; their use, especially by persons suffering from diphtheria, being liable to defer the calling in of proper medical attention until too late to prevent a fatal termination of the disease.

• Due to the restriction of the use of pharmacopoeial titles for standard preparations, it was found necessary to have manufacturers change the names of a number of products which had been registered previously.

Extension of time was granted by Order in Council for the legal disposal of all proprietary or patent medicines for internal use bearing old registration numbers issued under the Act of 1908, still on the market, and for the legal disposal of all external proprietary or patent medicines bearing the external medicine stamp "Prior to Proprietary or Patent Medicine Act 1919." The inspectors of the department report a large quantity of these preparations still carried in the stocks of druggists and dealers.

In dealing with medicines containing alcohol in excess of $2\frac{1}{2}$ per cent and available for use as beverages the department acted in co-operation with the administrators of the Liquor Laws of the various provinces.

A very marked improvement is noted in the general tone of advertisements and claims made for medicines subject to the Act.

DIVISION OF CHILD WELFARE

CO-OPERATION

Co-operation with departments of the Dominion Government has been maintained during the year. By correspondence and conference this division has also co-operated with the provincial authorities as well as with sixteen or more voluntary associations, national and provincial.

MATERNAL MORTALITY

Public attention has been directed to this subject during the year by references in the House of Commons and elsewhere. The number of letters received referring to this and subjects closely related thereto has much increased. Maternal mortality has been repeatedly considered by the Dominion Council of Health and it was at the request of that council a memorandum on maternal mortality was laid before the first conference on Medical Services in Canada on December 19, 1924. At that conference a resolution was passed unanimously, "that the Federal Department of Health be requested to undertake a comprehensive inquiry in regard to maternal mortality in Canada."

Much time has been devoted during the last three months to making plans for this inquiry and the personal co-operation of a number of physicians, who have already shown themselves interested in the subject, has been secured. It is hoped that a preliminary report of the inquiry will be ready before the end of 1925.

PUBLICATIONS

The constantly increasing work of the division made it impossible this year to prepare additional series of "The Little Blue Books." Urgent requests have been received for these, especially for series suitable for adolescents, for use in schools, for the benefit of children needing special care, and for the parents of children who are brought before the Juvenile Court or are dealt with by probation officers.

Three hundred and thirty-eight thousand four hundred and sixty-seven copies of "The Little Blue Books" were distributed during the year, including 55,951 copies of "The Canadian Mother's Book," 46,900 in English and 9,051 in French.

Requests have been received from the Punjab, from the Dominion of South Africa, and from a number of other countries for copies of "The Little Blue Books." A request has also been received to translate the books into Japanese.

SUPPLEMENT TO THE CANADIAN MOTHER'S BOOK

The revised edition of the "Supplement to the Canadian Mother's Book" has been distributed as far as possible to homes in outlying and sparsely settled parts of the country. A number of requests have been made for additions to the subject-matter of this book. The Commissioner of the Royal Canadian Mounted Police has placed a supply of these books together with "The Canadian Mother's Book" at Port Nelson, York Factory, Hudson Bay and other stations, for use in cases of emergency.

By request, a list of books on Child Welfare has been prepared for the use of librarians, teachers, parents and others. It is now being distributed.

HOME SERVICE

At the request of certain provincial authorities a scheme to provide "Home Helpers" for mothers was outlined in a memorandum for presentation to women's institutes, and about 1,500 copies of the memorandum have been distributed to officials of the women's institutes and similar organizations, and to others. Many letters have been received upon the subject. The name "Home Service Nursing Corps" has been suggested. The plan is still under consideration.

Copies of the memorandum were also supplied by request to the Canadian Medical Association, the Canadian Nurses' Association, and to certain provincial associations for distribution to their members.

OUTPOST HOMES

The correspondence from outposts homes has increased during the year. A number of outpost hospitals and nursing stations have been established by municipalities, by the Provincial Red Cross, and in other ways.

IMMIGRANT CHILD WELFARE

During the last three months of the fiscal year 1923-24 it became evident that more should be done in regard to the whole question of the proper care of children not in their own homes nor under the care of their own relatives, especially those children who had recently come to Canada from overseas. Co-operation and correspondence was constantly maintained with the provincial authorities in regard to this matter, and after consultations with the Minister of Immigration a conference was arranged to take place in Toronto on June 23, 1924. At this conference those present included most of the provincial superintendents for children's work and representatives from the Department of Immigration and Colonization and the Chief of the Division of Child Welfare, Department of Health. On this occasion a memorandum, which had already been sent to the persons concerned, was considered at length and a practically unanimous agreement was reached by the provincial representatives.

Shortly afterwards the visit of the British Overseas Settlement Delegation to Canada took place and it was felt that further action should be delayed until the report of this delegation was received. As soon as it was received, copies were forwarded to each of the provincial superintendents, and in March, 1925, considered replies and opinions as to further action were received from them. These opinions are now being compared and consolidated into a brief memorandum in order to prepare the way for further action.

CHILDREN AND YOUNG PERSONS IN PENITENTIARIES

The Canadian Association of Child Protection Officers at their annual meeting at Toronto in June, 1924, again appointed a special committee to prepare a memorial on this subject for presentation to the Honourable the Minister of Justice and the Honourable the Attorney General of Canada. At the request of the officers of the association and the members of the special committee this memorial was prepared and it was presented by the president of the association, the Rev. A. G. Cameron, Chief Probation Officer of the Juvenile Court of Ottawa, to the Honourable the Minister of Justice on March 12, and at a later date to the Honourable Attorney General. The leading theme of the memorial is the necessity for a different plan of dealing with youthful inmates of the penitentiaries, and especially the need of a separate institution and new methods for their care and training.

CHILDREN NEEDING SPECIAL CARE

On November 4, by special invitation, the chief of the division was present at an interview with the Premier of Ontario, the Provincial Secretary, and the Attorney General, when a deputation presented for consideration an outline of the proposed organization of a permanent home for children who are sub-normal mentally, but who as pupils in auxiliary classes have been able to learn industrial occupations and need further training and supervision both before and after they are paroled. This home is also intended for auxiliary class pupils and others who require care, supervision, and protection for their own sakes and for the sake of the community. The result of the interview was encouraging.

MISCELLANEOUS

At the request of the Child Study Section of the University Women's Club of Ottawa, arrangements were made for a series of six lectures on subjects connected with child welfare at the meetings of the section. These meetings have been well attended and a great deal of interest has been shown.

Assistance was given to the National League for Health, Maternity and Child Welfare of Great Britain in their efforts to secure co-operation from Canada in the "Better Babies Competition" at the British Empire Exhibition at Wembley.

FOOD AND DRUGS DIVISION

During the fiscal year ended March 31, 1925, the Food and Drugs Division has been actively engaged in the routine work of enforcement of the Food and Drugs Act, and of related legislation administered by the department. The number of samples analysed shows an increase over that of last year, in spite of the fact that the laboratory at Halifax was necessarily disturbed for several weeks because of removal to another location in that city. The transfer has been completed and the new premises are found to be quite satisfactory; in fact, much better than those formerly occupied.

The activities of the Montreal laboratories are especially noteworthy. This is an important port and the inspection of foods before entry is allowed has been effective in preventing the dumping of goods inferior in quality or improperly labelled. Inspection at Toronto is somewhat handicapped by lack of laboratory facilities at that point, but it is hoped that such an extension of this service will be possible in the near future.

Systematic surveys of the market in several lines of foods and drugs have been made. Where deficiencies have been found, adjustments have been effected, although in some cases it has been found necessary to institute legal proceedings

in order to accomplish this result. In no instances have the findings of the court shown that the actions taken were unjustifiable.

The retirement of Inspectors Rickey and Cosgrove at Vancouver and Winnipeg respectively necessitated the adjustment of the inspection service. Although it is not an easy matter to secure men with natural aptitude and training for this important work, a full staff of twenty-six inspectors is now operating.

The following tables summarize the activities of the analysts and inspectors:—

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED

OTTAWA

| Nature of Samples | Number Examined | Nature of Samples | Number Examined |
|----------------------------------|-----------------|------------------------------|-----------------|
| Acetic Acid..... | 3 | Dubbing..... | 4 |
| Acid Phosphoric..... | 1 | Dyes..... | 40 |
| Almond Extract..... | 2 | Egg Albumen..... | 6 |
| Ambergris..... | 1 | Essence of Lemon..... | 1 |
| Animal Oil..... | 4 | Essence of Peppermint..... | 3 |
| Aromatic Spirits of Ammonia..... | 4 | Ether..... | 6 |
| Asperin Tablets..... | 4 | Evaporated Milk..... | 1 |
| Bacon..... | 1 | Ferro China Ricca..... | 1 |
| Baking Powder..... | 4 | Figs..... | 1 |
| Beans..... | 10 | Fish..... | 1 |
| Beef, Iron and Wine..... | 2 | Flavoring Extracts..... | 3 |
| Biscuits..... | 1 | Fluids, Lifts and Jacks..... | 6 |
| Bismuth Sub-Nitrate..... | 7 | Fowler's Solution..... | 5 |
| Black Pepper..... | 56 | Gasoline..... | 5 |
| Boracic Acid..... | 23 | Gelatine..... | 26 |
| Breakfast Food..... | 1 | Ginger..... | 5 |
| Burnt Sponge..... | 1 | Ginger root..... | 4 |
| Butter..... | 49 | Glaxo..... | 1 |
| Calamina Preparata..... | 1 | Goitre Lintiment..... | 1 |
| Camphorated Oil..... | 21 | Gum Acacia..... | 3 |
| Candy..... | 47 | Ham..... | 1 |
| Candy Coating..... | 6 | Hamburg Steak..... | 52 |
| Canned Corn..... | 1 | Herbo Preparation..... | 1 |
| Canned Fish..... | 7 | Honey..... | 18 |
| Canned Fruits..... | 4 | Hydrogen Peroxide..... | 4 |
| Canned Pineapples..... | 1 | Ice Cream..... | 7 |
| Caramels..... | 5 | Inks..... | 5 |
| Carbolic Acid solution..... | 1 | Insecticides..... | 1 |
| Catsup..... | 3 | Invalid Port..... | 1 |
| Cheese..... | 3 | Iodex Methyl Salicylate..... | 1 |
| Chemical..... | 1 | Jams..... | 48 |
| Chicory..... | 1 | Jellies..... | 8 |
| Chloride of Lime..... | 14 | Kayao Compound..... | 1 |
| Chloroform..... | 9 | La Choy Products..... | 3 |
| Chocolates..... | 1 | Larvex..... | 1 |
| Cider..... | 2 | Lemon Cheese..... | 5 |
| Cider Vinegar..... | 1 | Lemon extract..... | 6 |
| Cinchona Powder..... | 4 | Lime Juice..... | 3 |
| Cinnamon..... | 1 | Lime Water..... | 3 |
| Citrate of Magnesia..... | 7 | Liquor Arsenicalis..... | 3 |
| Cloves..... | 41 | Lubricating Oils..... | 18 |
| Clove stems..... | 1 | Mace..... | 7 |
| Cocaine for purity..... | 39 | Malt Extract..... | 6 |
| Cocoa..... | 4 | Malt Vinegar..... | 2 |
| Cocoa Butter..... | 11 | Maple Butter..... | 1 |
| Cocanut..... | 9 | Maple Sugar..... | 17 |
| Cod Liver Oil Extract..... | 1 | Maple Syrup..... | 78 |
| Coffee..... | 12 | Marine Oil..... | 5 |
| Condensed Milk..... | 1 | Marmalade..... | 1 |
| Cordial..... | 1 | Meat..... | 1 |
| Cottonseed Oil..... | 1 | Medicated Wines..... | 19 |
| Cough Syrup..... | 1 | Medicines..... | 5 |
| Crabapple Jelly..... | 1 | Metal Polish..... | 3 |
| Cream of Tartar..... | 4 | Milk..... | 1 |
| Custard Powder..... | 1 | Mince Meat..... | 4 |
| Desiccated Eggs..... | 1 | Mineral Oil..... | 2 |
| Diabetic Foods..... | 12 | Molasses..... | 3 |
| Dried Eggs..... | 1 | Mustard..... | 6 |
| Dried Fruits..... | 42 | Naphthalene Flakes..... | 1 |
| Drugs..... | 1 | Narcosan..... | 1 |

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED—Continued

OTTAWA—Concluded

| Nature of Samples | Number Examined | Nature of Samples | Number Examined |
|---------------------------|-----------------|-----------------------------|-----------------|
| Narcotic Drugs..... | 57 | Soda Ash..... | 1 |
| Nutmegs..... | 9 | Soda Biscuits..... | 1 |
| Oils..... | 12 | Soy Bean Powder..... | 1 |
| Olives..... | 1 | Spirits of Camphor..... | 6 |
| Olive Butter..... | 3 | Spirits of Iron..... | 1 |
| Olive Oil..... | 7 | Spirits of Nitre..... | 10 |
| Oranges..... | 1 | Spirits Vinegar..... | 3 |
| Orange Juice..... | 1 | Stomachs of ducks..... | 2 |
| Orange Pulp..... | 1 | Sugar..... | 4 |
| Paints..... | 36 | Sugar Cake..... | 1 |
| Pancake Syrup..... | 2 | Sugar deposit..... | 1 |
| Paprika..... | 4 | Sulphites..... | 2 |
| Patent Medicines..... | 24 | Sweet Oil..... | 2 |
| Peanut Butter..... | 1 | Table Syrup..... | 7 |
| Pemmican..... | 1 | Tablets..... | 1 |
| Peppermint Extract..... | 2 | Tanlac..... | 1 |
| Peppermint Oil..... | 1 | Tincture of Camphor..... | 1 |
| Pickles..... | 1 | Tincture of Iodine..... | 13 |
| Pop Corn..... | 1 | Tincture of Nux Vomica..... | 4 |
| Pork and Beans..... | 4 | Tomatoes..... | 1 |
| Powdered Milk..... | 3 | Tomato Catsup..... | 14 |
| Preservaline..... | 1 | Tomato Paste..... | 5 |
| Preservatives..... | 4 | Tomato Sauce..... | 1 |
| Procaine..... | 1 | Tonic Wines..... | 21 |
| Pudding..... | 1 | Vanilla Extract..... | 7 |
| Quinine Wines..... | 3 | Vaporizing Oil..... | 1 |
| Raw Linseed Oil..... | 1 | Vaseline..... | 1 |
| Rolled Oats..... | 2 | Vaseline Camphorated..... | 1 |
| Saddle Soap..... | 1 | Varnish..... | 10 |
| Salt..... | 4 | Vinegar..... | 11 |
| Saltpetre..... | 1 | Walnuts..... | 1 |
| Sausage..... | 54 | Water..... | 9 |
| Sausage Casings..... | 10 | Weiners..... | 1 |
| Seidlitz Powders..... | 2 | White Lead..... | 1 |
| Shortening..... | 3 | White Pepper..... | 3 |
| Silco..... | 1 | Wines..... | 1 |
| Sirup Laval & Panlac..... | 2 | | |
| Soap..... | 15 | Total..... | 1,408 |
| Soap Liniment..... | 3 | | |

MONTREAL

| | | | |
|-----------------------------------|----|-------------------------------------|----|
| Allspice..... | 1 | Ice Cream..... | 43 |
| Ammonia, Aromatic Spirits of..... | 19 | Iodine Ointment..... | 11 |
| Ammonia, Strong solution of..... | 20 | Lemon Extract..... | 3 |
| Aspirin (5 grain tablets)..... | 9 | Lime Juice..... | 3 |
| Aspirin Compound (tablets)..... | 1 | Macaroni..... | 14 |
| Baking Powder..... | 9 | Magnesia, calcined..... | 17 |
| Bleaching Powder..... | 37 | Magnesia, carbonate of..... | 18 |
| Borax..... | 15 | Maple Sugar..... | 42 |
| Boric Acid..... | 17 | Maple Syrup..... | 17 |
| Butter..... | 17 | Milk..... | 1 |
| Camphorated Oil..... | 4 | Molasses..... | 42 |
| Candies..... | 59 | Mustard..... | 12 |
| Cassia..... | 2 | Nux Vomica, liquid, extract of..... | 17 |
| Catsup..... | 1 | Oil of Cloves..... | 14 |
| Cheese..... | 1 | Olive Oil..... | 1 |
| Cherries (Maraschino)..... | 20 | Orange Syrup..... | 1 |
| Cloves..... | 35 | Patent medicines..... | 2 |
| Cochineal (Extract of)..... | 1 | Pepper—Black pure..... | 35 |
| Coffee..... | 8 | Compound..... | 13 |
| Cream..... | 10 | White pure..... | 32 |
| Cream of Tartar (Pure)..... | 12 | Compound..... | 12 |
| Creo-terpin Compound..... | 1 | Red..... | 1 |
| Epsom Salt..... | 16 | Substitute..... | 1 |
| Flour..... | 2 | Potassium Chlorate Tablets..... | 21 |
| Formalin..... | 21 | Raspberry extract..... | 1 |
| Ginger..... | 16 | Rochelle Salt..... | 21 |
| Glauber's Salt..... | 18 | Salol..... | 16 |
| Golden Syrup..... | 1 | Salt..... | 1 |

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED—Continued

MONTREAL—Concluded

| Nature of Samples | Number Examined | Nature of Samples | Number Examined |
|---|-----------------|---|-----------------|
| Sausages..... | 35 | <i>Samples submitted by the Royal Canadian Mounted Police</i> | |
| Seidlitz Powders..... | 19 | | |
| Sodium Phosphate (Effervescing)..... | 15 | | |
| Sodium Sulphate (Effervescing)..... | 1 | | |
| Soft Drinks..... | 87 | | |
| Spaghetti..... | 13 | | |
| Strawberry Wine..... | 1 | | |
| Strychnine Pills..... | 12 | | |
| Sugar (Crystd. from Maple Sugar)..... | 1 | | |
| Sugar Syrup..... | 1 | Alcohol..... | 1 |
| Sweet Spirits of Nitre..... | 3 | Atophan..... | 2 |
| Syrup of Phosphate of Fe (with Quin. and Strychnine)..... | 8 | Drug..... | 1 |
| Tincture of Iodine, weak..... | 7 | Gasoline..... | 1 |
| “ “ Strong..... | 14 | Gauvin's Syrup..... | 2 |
| Tomato paste..... | 1 | Luminal..... | 3 |
| Tonic Wines..... | 3 | Narcotics..... | 132 |
| Vanilla Extract..... | 7 | Total..... | 142 |
| Vinegar—Cider..... | 10 | <i>Submitted by Dept. of Agriculture</i> | |
| —Malt..... | 11 | | |
| Water..... | 18 | | |
| Total..... | 1,053 | | |
| <i>Importations</i> | | Butter..... | 538 |
| Apricots dried..... | 22 | Cheese..... | 12 |
| Beans..... | 8 | Cream..... | 7 |
| Cherries (Maraschino)..... | 1 | Total..... | 557 |
| Chesnuts..... | 5 | <i>Special Samples</i> | |
| Cocoa Powder..... | 1 | | |
| Dye..... | 1 | | |
| Hot Scotch..... | 1 | | |
| Olive Oil..... | 3 | Aspirin..... | 6 |
| Olives, black..... | 3 | Baking Powder..... | 37 |
| Peaches (dried)..... | 14 | Calcined Magnesia..... | 1 |
| Pears (dried)..... | 5 | Cream..... | 2 |
| Pecan nuts..... | 1 | Exhibits from Enforcement Officers of Excise..... | 4 |
| Sugar..... | 44 | Iodine Ointment..... | 1 |
| Tomato Paste..... | 2 | Maple Syrup..... | 3 |
| Tomato Sauce..... | 2 | Milk..... | 2 |
| Walnuts..... | 1 | Total..... | 56 |
| Total..... | 114 | | |

Recapitulation

| By Whom Submitted | Number Examined | Adulterated or Misbranded | Percentage of Adulteration and Misbranding |
|------------------------------------|-----------------|---------------------------|--|
| Departmental Inspectors..... | 1,053 | 358 | 34.0% |
| Importations..... | 114 | 9 | 7.9% |
| Royal Canadian Mounted Police..... | 142 | | |
| Department of Agriculture..... | 557 | | |
| Special..... | 56 | | |
| Total..... | 1,922 | 367 | |

DEPARTMENT OF HEALTH

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED—Continued

HALIFAX

| Nature of Samples | Number Examined | Nature of Samples | Number Examined |
|---------------------------------------|-----------------|---|-----------------|
| Borax..... | 19 | <i>Importations examined—Concluded</i> | |
| Canned Corn..... | 1 | Coffee..... | 1 |
| Cayenne Pepper..... | 13 | Frozen eggs..... | 1 |
| Chlorinated Lime..... | 27 | Fruit, dried..... | 118 |
| Chloroform..... | 2 | Nuts, Brazil..... | 15 |
| Cloves, ground..... | 17 | Almonds..... | 7 |
| Comb Honey..... | 1 | Chestnuts..... | 2 |
| Coffee..... | 12 | Filberts..... | 3 |
| Cream of Tartar..... | 25 | Peanuts..... | 18 |
| Ginger..... | 2 | Pecans..... | 4 |
| Grape Juice..... | 6 | Pistachios..... | 1 |
| Ice Cream..... | 17 | Walnuts..... | 29 |
| Lemon Extract, compounds, etc..... | 28 | Olive Oil..... | 1 |
| Lime Juice..... | 11 | Peaches canned..... | 3 |
| Maple Products..... | 69 | Preservatives..... | 2 |
| Macaroni and similar Products..... | 21 | Sausage..... | 1 |
| Marmalade..... | 1 | Sugar..... | 16 |
| Molasses..... | 2 | Spices, Cassia..... | 9 |
| Nuts, mixed..... | 12 | Cloves..... | 8 |
| Nux Vomica, tincture..... | 12 | Ginger..... | 10 |
| Oranges..... | 10 | Pepper..... | 14 |
| Paprika..... | 1 | Nutmegs..... | 6 |
| Pepper, ground..... | 53 | Miscellaneous..... | 28 |
| Patent medicine..... | 1 | | |
| Prepared Mustard..... | 12 | Total importations examined.... | 306 |
| Prunes..... | 4 | | |
| Pickles..... | 1 | <i>Special samples, for other Departments, etc.</i> | |
| Raisins..... | 7 | Creosote Oil and Shavings..... | 2 |
| Sausages..... | 48 | Butter..... | 3 |
| Tea..... | 9 | Beer..... | 1 |
| Vanilla extracts, compounds, etc..... | 30 | Ginger..... | 3 |
| Vinegar..... | 17 | Lemon Extracts..... | 3 |
| Total..... | 491 | Total..... | 12 |
| <i>Importations examined</i> | | Total Samples analyzed..... | 809 |
| Almond Paste..... | 1 | | |
| Beans..... | 8 | | |

WINNIPEG

| | | | |
|--------------------------|----|------------------------|----|
| Allspice..... | 8 | Corn Starch..... | 1 |
| Almond Flavouring..... | 1 | Cream..... | 3 |
| Apple Butter..... | 1 | Cream Tartar..... | 3 |
| Arnica, Tinct..... | 1 | Custard Powder..... | 1 |
| Baking Powder..... | 5 | Dried Fruits..... | 36 |
| Baking Soda..... | 1 | Dye, Food..... | 1 |
| Benzoin, Cpd. Tinct..... | 1 | Egg Noodles..... | 1 |
| Boracic Ointment..... | 1 | Epsom Salts..... | 1 |
| Borax..... | 3 | Evaporated Milk..... | 1 |
| Camphorated Oil..... | 68 | Fruit Syrup..... | 1 |
| Camphor Spirits..... | 3 | Gentian, Tinct..... | 2 |
| Canned Soup..... | 1 | Ginger Extract..... | 1 |
| Cascara, Aromatic..... | 1 | Ginger, Ground..... | 9 |
| Cassia, Ground..... | 6 | Glycerine..... | 1 |
| Castor Oil..... | 2 | Grape Juice..... | 4 |
| Catsup, Tomato..... | 1 | Hamburg Steak..... | 20 |
| Cayenne, Ground..... | 1 | Honey..... | 12 |
| Celery Salt..... | 3 | Hydrogen Peroxide..... | 2 |
| Certo, Fruit Pectin..... | 1 | Ice Cream..... | 21 |
| Chlorinated Lime..... | 36 | Iodine, Tinct..... | 11 |
| Cloves, Ground..... | 53 | Jelly Powders..... | 2 |
| Cloves, Whole..... | 1 | Laxative Tea..... | 1 |
| Cocoa..... | 16 | Lemon Flavouring..... | 7 |
| Coffee, ground..... | 76 | Lime Water..... | 41 |
| Coffee Substitute..... | 1 | Macaroni..... | 13 |
| Condensed Coffee..... | 1 | Mace, Ground..... | 1 |
| Corn Oil..... | 1 | Maple Sugar..... | 2 |

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED—Continued

WINNIPEG—Concluded

| Nature of Samples | Number Examined | Nature of Samples | Number Examined |
|--------------------------------|-----------------|-------------------------------------|-----------------|
| Maple Syrup..... | 44 | Turmeric..... | 1 |
| Marshmallow Cream..... | 1 | Vanilla..... | 5 |
| Milk Powders..... | 2 | Vinegar..... | 20 |
| Mustard, Compound..... | 1 | Wines..... | 30 |
| Mustard, Ground..... | 1 | | |
| Nitre, Sweet Spirit of..... | 2 | Total..... | 1,253 |
| Nutmeg, ground..... | 2 | | |
| Olive, Butter..... | 1 | | |
| Olive Oil..... | 11 | Occasional Samples | |
| Olives, chopped..... | 1 | From other Federal Departments—Con. | |
| Orange Flavour..... | 1 | Dept. of Agriculture, Butter..... | 4 |
| Oranges..... | 275 | “ “ Dried Fruits..... | 352 |
| Packaged Foods..... | 8 | “ “ Feeds..... | 3 |
| Pancake Flour..... | 1 | “ “ Fertilizers..... | 7 |
| Paprika..... | 1 | Customs and Excise— | |
| Paraffin in Confectionery..... | 21 | Customs, Beans..... | 12 |
| Pastry Spice..... | 2 | “ Celery..... | 51 |
| Peanut Butter..... | 6 | “ Cocoa..... | 33 |
| Pepper, black..... | 82 | “ Isinglass..... | 1 |
| Pepper, white..... | 62 | “ Olive Oil..... | 60 |
| Peppermint flavour..... | 1 | “ Preservative..... | 1 |
| Postum..... | 1 | “ Sugar..... | 1 |
| Potato Flour..... | 1 | Excise, Liquors..... | 26 |
| Potted Meats..... | 2 | Indian Affairs, Liquors..... | 5 |
| Raisins, Packaged..... | 6 | R.C.M. Police, Narcotics..... | 31 |
| Raspberry flavour..... | 1 | From other sources— | |
| Sage, Ground..... | 5 | Beer..... | 5 |
| Saltpetre..... | 2 | Cocoa..... | 1 |
| Samples for Labelling..... | 6 | Ginger..... | 1 |
| Sausages..... | 38 | Maple Syrup..... | 3 |
| Savory..... | 6 | Vanilla..... | 3 |
| Self Rising Flour..... | 1 | Vinegar..... | 9 |
| Shortbread..... | 5 | | |
| Soft Drinks..... | 91 | Occasional samples, total..... | 609 |
| Strawberry flavour..... | 2 | | |
| Sweet Oil..... | 1 | Grand Total, all samples..... | 1,862 |
| Table Syrup..... | 3 | | |

VANCOUVER

| | | | |
|-------------------------------|----|-----------------------------|-------|
| Albumen..... | 3 | Nuts, Pecan..... | 1 |
| Apples, Evaporated..... | 3 | Nuts, Peanuts in shell..... | 1 |
| Beans..... | 30 | Nuts, Peanuts shelled..... | 6 |
| Cocoa..... | 4 | Nuts, Brazil..... | 13 |
| Coffee and Chicory Ess..... | 1 | Nutmegs..... | 14 |
| Eggs desiccated..... | 5 | Onion Powder..... | 2 |
| Eggs, Frozen..... | 2 | Oranges Navel..... | 582 |
| Essences Wine..... | 1 | Oranges Oriental..... | 78 |
| Figs..... | 5 | Oil Olive..... | 12 |
| Fruits Dried..... | 94 | Oil Wesson..... | 3 |
| Flour, cake..... | 1 | Pimento, canned..... | 1 |
| Flour "Acme Special"..... | 1 | Pimento, dried..... | 1 |
| Flour, Sausage..... | 1 | Preservatives..... | 4 |
| Fish and Poultry, canned..... | 1 | Pineapple, canned..... | 1 |
| Food color, grape..... | 2 | Sardines in oil..... | 1 |
| Food color, butter..... | 1 | Spices, Cassia Whole..... | 1 |
| Food color, liquid..... | 1 | “ Cloves whole..... | 6 |
| Food color, pastes..... | 2 | “ Ginger whole..... | 2 |
| Gelatin..... | 1 | “ Mace whole..... | 10 |
| Jelly Powders..... | 1 | “ Mace ground..... | 1 |
| Macaroni..... | 58 | “ Mixed ground..... | 1 |
| Meat and Fish Pastes..... | 16 | “ Pepper ground..... | 2 |
| Milk, powdered..... | 1 | “ Pepper Whole..... | 20 |
| Nulomoline "Sugar"..... | 1 | Sugar..... | 59 |
| Nuts, Almonds shelled..... | 4 | Vanilla beans..... | 1 |
| Nuts, Walnuts in shell..... | 12 | | |
| Nuts, Walnut Meats..... | 85 | Total Import Samples..... | 1,160 |

DEPARTMENT OF HEALTH

SUMMARY OF SAMPLES OF FOOD AND DRUGS ANALYZED—*Concluded*VANCOUVER—*Concluded*

| Nature of Samples | Number Examined | Nature of Samples | Number Examined |
|---------------------------------|-----------------|---|-----------------|
| Apple Cider..... | 2 | <i>From Federal Departments—Concluded</i> | |
| Bologna and Weiners..... | 20 | Customs-Excise Department— | |
| Camphorated Oil..... | 22 | Liquor..... | 1 |
| Caramels..... | 2 | Narcotics..... | 1 |
| Chlorinated Lime..... | 32 | | 2 |
| Cloves, ground..... | 25 | | |
| Cocoa..... | 1 | | |
| Cough Syrup..... | 1 | R.C.M.P.— | |
| Diarrhoea mixture..... | 1 | Drugs Suspected..... | 3 |
| Fruits, evaporated..... | 10 | “narcotic..... | 62 |
| Ginger..... | 2 | Mashes..... | 4 |
| Hamburger steak..... | 118 | | 69 |
| Honey..... | 1 | | |
| Horse Radish..... | 1 | | |
| Ice Cream..... | 29 | Department of Indian Affairs— | |
| Jam, plum..... | 1 | Lemon Extract..... | 1 |
| Jam, Strawberry..... | 3 | | |
| Kipperd Herring..... | 1 | Marine and Fisheries Department— | |
| Loganberries, dried..... | 2 | Canned Salmon..... | 1 |
| Maple butter..... | 1 | | |
| Maple Syrup..... | 7 | Soldiers Civil, Re-establishment— | |
| Pepper, ground..... | 105 | Cocoa..... | 4 |
| Preservatives..... | 13 | | |
| Salt table..... | 1 | Special Samples— | |
| Sausages..... | 38 | Alcohol..... | 1 |
| Soft drinks..... | 8 | Maple Syrup..... | 2 |
| Spirits nitrous ether..... | 1 | Strawberry Jam..... | 4 |
| Tincture Iodine..... | 10 | | 7 |
| Turpentine..... | 1 | | |
| Vinegar, brown..... | 2 | | |
| “cider..... | 10 | | |
| “malt..... | 10 | | |
| Whiskey..... | 1 | | |
| Total Domestic Samples..... | 482 | <i>Summary</i> | |
| <i>From Federal Departments</i> | | Import samples..... | 1,160 |
| Department of Agriculture— | | Domestic samples..... | 482 |
| Meat and Canned Foods— | | Department of Agriculture..... | 145 |
| Evaporated fruits..... | 134 | Customs-Excise Department..... | 2 |
| Jam..... | 1 | R.C.M.P..... | 69 |
| Potted meats..... | 10 | Department of Indian Affairs..... | 1 |
| | 145 | Marine and Fisheries Department..... | 1 |
| | | Soldiers Civil Re-establishment..... | 4 |
| | | Special Samples..... | 7 |
| | | Grand Total..... | 1,871 |

PROSECUTIONS UNDER FOOD AND DRUGS ACT AND THE MAPLE ACT

| | |
|--|----|
| Adulterant, (Possession of, under Section 21)..... | 1 |
| Butter..... | 4 |
| Ginger..... | 1 |
| Lime Juice..... | 1 |
| Maple Syrup..... | 3 |
| Maple Sugar..... | 3 |
| Meats, (Including Hamburg Steak and Sausages)..... | 48 |
| Medicated Wines..... | 5 |
| Milk..... | 1 |
| Seidlitz Powder..... | 1 |
| Table Syrup..... | 7 |
| Tincture of Iodine..... | 1 |
| Vinegar (including Acetic Acid)..... | 8 |
| Total..... | 84 |

PROSECUTIONS UNDER FOOD AND DRUGS ACT AND THE MAPLE ACT—*Concluded**Cases disposed of*

| | |
|-------------------------|----|
| Convictions..... | 39 |
| Voluntary Payments..... | 25 |
| Withdrawn..... | 8 |
| Unfinished..... | 11 |
| Dismissed..... | 1 |
| Total..... | 84 |

LABORATORY OF HYGIENE

During the course of the past year the laboratory has carried out a considerable amount of bacteriologic investigations on canned foods on behalf of the Food and Drugs Laboratory. Standards have been undertaken, after considerable experimentation, for the discovery and grading of suspected ground, mouldy nutmegs, and it would appear that these standards when adopted will lead to identification of undesirable specimens of this material when found on the market.

Attention has been paid to the development of making bacterial vaccines with a particular inquiry in regard to acne. This work was undertaken to establish certain facts that will shortly be found necessary for the examination of bacterial vaccines upon the market.

Examinations of certain water supplies have been undertaken.

Research work has been in progress throughout the year looking to the elimination of technical defects in regard to the isolation and identification of the typhoid bacillus from certain sources. This work has been brought to a successful conclusion and the results will soon be published.

Investigations of the potency of such drugs on the market as digitalis, strophanthus and pituitrin have been undertaken and a great deal of valuable information has already been obtained.

POLLUTION OF BOUNDARY WATERS

WATER SUPPLIES ON VESSELS PLYING ON THE GREAT LAKES AND INLAND WATERS

Until the present time the work carried on under this heading has been entirely confined to but one phase of this international problem, i.e., the supply of a potable water free of pathogenic bacteria, for vessels engaged in navigation on the inland waters of Canada. This question is similar and comparable to that of any organized community. The transient population of some of these vessels may, in the course of a few months or a year, be equivalent to the normal population of a large city, and as such it is worthy of serious consideration. To-day this floating city may be a focus of infection for a dangerous communicable disease. To-morrow, before any suspicious symptoms develop this transient population may have scattered, spreading sickness to cities and other communities throughout the whole country.

Aboard a vessel water has many uses—the most important being for drinking, culinary, ablutionary, fire, boiler, sanitary, cleaning, and ballast purposes. The safety of the water for drinking, culinary, and ablutionary purposes is of great public health significance.

The cost and difficulty of providing an adequate supply of safe water is responsible for the existence of more than one water system aboard a vessel. This is always a potentially dangerous condition and one which should not be overlooked.

The quality of the water in which a vessel plies is the controlling factor in the choice of the source of the drinking and culinary supply. The investigations

of the sanitary experts of the International Joint Commission have demonstrated that while the waters of the Great Lakes are, generally speaking, of a high degree of purity, they are also subject to serious local pollution in the vicinity of cities. So also the waters of the St. Lawrence, Niagara, Detroit, St. Clair, and St. Mary rivers were shown to be too grossly polluted by sewage and industrial wastes to be satisfactory sources for drinking water.

The increasing degree of contamination of our rivers, lakes, and coastal waters and the growth in transportation by water is making the furnishing of a safe drinking water a problem of greater and greater importance and difficulty. However, with the co-operation of the vessel companies and their associations, the various city and provincial health departments, and the federal health services of the United States and Canada encouraging progress is being made.

The pollution of the boundary waters by the discharge of sewage and other rubbish from the steamships is in addition to that caused by the discharges from the sewers of the various municipalities along their margin.

Regarding the polluted condition of the waters of the Kaministiquia river at Fort William, it was stated by Dr. N. O. Thomas that children bathing in this river frequently develop an affection of the skin similar to acne.

Storage tanks, on passenger vessels, for drinking water should be of two groups, one for raw water and the other for treated water, adequately protected from pollution by bilge water, and well ventilated. Delivery to raw water tanks may be by gravity directly through the seacock or by pump. In either case before filling the tanks it is good practice to waste the first portion of water entering the seacock to permit of thorough flushing. A vessel should have adequate tank capacity to meet maximum conditions for its cruising range between desirable watering places.

Water storage tanks on vessels are of two kinds. viz. (1) those for gravity distribution systems and which are therefore located on the upper decks, and (2) those with pressure systems, which are usually located in the hold of the ship. Large gravity feed tanks have the disadvantage of placing weight where it tends to make the vessel top-heavy, so that care should be taken in selecting their location. Tanks in pressure systems are frequently in the forward or after peak, or end compartments of the vessel, or in the shaft alley between the engine room and the stern. Tanks for storage of drinking water should not be formed even in part by the hull, a deck, or a bulkhead of the vessel, lest the loosening of a plate should permit the entrance of polluted water from harbour or bilge. As a result of impact in docking and of vibration, the shearing of rivets often causes plates to start and seams to open, especially in the bow and stern. The presence of drainage pipes or soil pipes passing through the water storage tanks is dangerous. The tanks should not be located very close to boiler rooms because of the temperature, which not only may give rise to high bacterial counts but also requires more cooling before a palatable water is available. Peak tanks, forward or aft, are usually undesirable for the storage of water as it has been a common practice in the past to place the crew's toilets on the main deck above them.

The tanks are almost without exception made of steel and therefore require protection against rust, especially when distilled water is stored in them. Coatings of various kinds are used, particularly cement grout, bituminous materials, enamel and glass. Ordinarily entrance into the tanks is necessary once a year for repairs and renewing the protective coating, and entrance for other purposes is forbidden.

Although there has been much improvement within the past year, there is still a great variation in the quantity of water available for drinking and culinary purposes on Great Lakes vessels. It is also noticeable that although it is a comparatively simple matter to obtain water of the required standard

of quality, there are still numerous passenger vessels of Canadian register in this area whose water tanks have a per capita capacity less than the water consumption on vessels of the British Navy or Merchant Marine.

One of the greatest sources of trouble is the existence of cross connections in the distribution system, or involved in an attempt to make one pump handle both drinking water and other water, such as bilge water, in emergencies. This danger is an insidious one because the piping systems on the larger vessels are extensive and it is easy to have an accidental cross connection in some out of the way corner. The most common location of them has been, however, in the engine room and the boiler room, notably in the manifold system, the boiler feed water system and in connection with pumps intended to serve a double purpose in emergencies. Another type is the by-pass around treatment apparatus. All of these cross-connections are expressly forbidden by regulations and must be removed when found.

Water taken on vessels from overboard is delivered through seacocks. These seacocks are located below the water line, and, therefore, there is always a positive pressure against the valves, necessitating tight connections to prevent seepage. As the waters in the harbours of the Great Lakes system are grossly polluted, the seacock is always a dangerous connection to any drinking water system. The clogging of valves by debris and the accidental opening or failure to close seacock valves in port are very serious matters to be considered when overboard water is used for the drinking supply. Even in the outer waters of the Great Lakes the taking on of drinking water from overboard is fraught with danger. Vessels usually ply on well-defined courses and during the heavy shipping season there may be distinct lines of pollution along these courses due to the common practice of discharging sewage and wastes overboard.

When possible the seacock through which the drinking water is taken aboard should be independent of all other seacock connections. Modern designers usually place seacocks convenient to the engine room, not infrequently these intakes are set without regard to the toilet outlets which are usually near the water line. Seacocks for drinking water inlets should be forward of all toilet outlets or at least on the opposite side of the vessel from such outlets.

Not infrequently seacocks are interconnected by large lines of horizontal piping. The fouling of any one of these lines is a difficult matter to correct. It is good practice to have double valves on all seacocks serving the drinking water system and to have an open valve or weep pipe between them. This arrangement gives warning of any leakage by the outer valve. The locking of seacock valves has been successfully practised on some vessels.

A common method of treating water to be used for drinking purposes on vessels is by distillation. Water so obtained is of course safe. It not infrequently has a flat disagreeable taste, is expensive to produce, and attacks metallic containers. Because of the cost of production the supply is usually limited, necessitating a second source of supply for ablutionary purposes, which is at best an undesirable condition.

Work on this matter was definitely commenced for the present year on April 15.

The general idea underlying the work done was the application of the Regulations concerning water for drinking and culinary purposes to vessels engaged in navigation on the Great Lakes and St. Lawrence river; a wider distribution of the Regulations to persons concerned in the operation of vessels on the other Inland Waters of Canada, and the continuation of the examination of the conditions prevailing relative to the supply of a potable water for drinking and culinary purposes on the Great Lakes steamships.

As in 1923, this involved the physical examination of the pumps, piping, tanks, outlets and water purification apparatus, if any (in addition to a quick

reconnaissance of the water supplies), in order to determine the eligibility of the various passenger steamships for the certificates required by Order in Council (P. C. 1091).

In this manner it was found possible to examine the water supply systems aboard forty-eight passenger steamships and forty-eight freight carriers during the season of 1924 and in addition to these detailed examinations, over 900 visits were made to steamships by health officials at the ports of Montreal, Toronto, Windsor, Owen Sound, Midland, Port McNicol, Sault Ste. Marie and Fort William, to obtain samples of water from the ships' drinking and culinary water systems for the purpose of bacteriological examination. As regards the passenger vessels, many of these were visited on two or more occasions to note improvements and alterations necessary for compliance with the Regulations.

The necessity for this examination of the water supply system of every vessel was emphasized by the conditions found aboard the fleet of the Canadian Government Merchant Marine, at Fort William in July, 1924.

During the season visits were made to the docks at the terminal ports of the various fleets of steamships engaged in this traffic and correspondence and interviews with health and navigation officials were carried on regarding the certification of water supplies ashore, compliance or non-compliance with the regulations for maintenance of water supplies of standard quality, etc.

Considerable co-operative work was carried on, as was the case in 1923, with the representatives of the United States Public Health Service, by mutual visits to Toronto, Detroit, and Chicago. Through the mails reports of inspections of vessel water supply systems, water analyses reports, certificates of shore water supplies, lists of steamships certificated, etc., were exchanged. So also intermittent inspection of vessel water systems on Canadian steamships passing through Sault Ste. Marie, Michigan, was carried on by the Inspector of the United States Public Health Service stationed at that point.

Throughout the season steamship companies operating vessels in Great Lakes traffic have been supplied regularly with copies of water analyses reports, and where it seemed advisable, attention of the management of these organizations was drawn to flagrant carelessness or violations of the regulations. Also, copies of the regulations concerning water for drinking and culinary purposes on vessels navigating on the Great Lakes and inland waters of Canada, were distributed to every known Canadian steamship company operating vessels on the inland waters of Canada in the provinces of Quebec, New Brunswick, Nova Scotia, Manitoba, Saskatchewan, Alberta, and British Columbia.

In estimating the effect of the application of the regulations *re* vessel water supplies, it is of interest to note the remarks of the Medical Officer of Health at Fort William, Ont. He stated that, while in 1923 some twenty-six persons were treated in the hospitals of that municipality for typhoid fever (eleven of these being traced directly to the steamships), up to October 16 of the present year there had been only one case of typhoid. There has also been a most decided improvement in the water supply services of practically all of the passenger steamships in order to qualify for the certificates required by the regulations. In this regard the water supply systems of all five vessels of the Canadian Pacific Great Lakes Steamships have been completely overhauled and reconstructed. Ultra Violet sterilizers and pressure filters were placed aboard the ss. *Assiniboia* and ss. *Keewatin*. Large new steel tanks were placed aboard the steamships *Manitoba*, *Alberta* and *Athabasca*, sterilization of their entire water supply systems being provided for by the installation of steam pipes, so arranged that the storage tanks, distribution pipes and outlets may be all steamed out. Similarly the water supply systems of the three passenger liners of the Northern Navigation Company also have been checked up and improved, although further work is required to bring the system of the ss. *Huron* to the standard of the regulations. The immediate result of these

improvements is seen in the satisfactory returns from the various laboratories at which bacteriological examinations of water samples have been made throughout the season.

Of the freight carriers, the vessels of the Algoma Central Navigation Company are properly equipped, but much remains to be done before certificates can be issued to most of the vessels of the other lines, although very considerable work has been done by such organizations as (a) The Eastern Steamships Line, (b) The Three Line, and (c) Great Lakes Transportation Company.

There is, however, room for considerable improvement in the water supplies of vessels of this type.

It has been very noticeable that much more care is being taken and interest shown in the question of vessel water supplies by the masters and engineers of the steamships visited than was the case during the previous season. In this regard there has been an improvement in the care of water taps on the passenger steamships of the Canadian Pacific and Northern Navigation lines. Old worn out taps have been replaced and the practice of washing taps with the most easily available water (frequently dirty, greasy suds) discontinued.

That the work done has been appreciated by the steamship companies is shown by letters to that effect now on the departmental files. Throughout the season of navigation correspondence with various steamship companies of Canadian registry has been very much larger than previously. Many more bacteriological reports on vessel water supplies have been forwarded to vessel owners, for their information, and action when necessary. In addition to routine discussions with vesselmen, interviews were had with head office officials of most of the transportation companies concerned.

A measure of the size of the problem presented in the supervision of vessel water supplies is given by consideration of the following facts.

The inland steamship business in 1923 was characterized by a striking increase in the tonnage operated on the Port Colborne-Montreal route. The total number of vessel passages through the Lachine canal was 8,183, amounting in tonnage to 4,922,200; number of passengers carried, 78,097.

Six of the companies engaged in this traffic added new ships to their fleets, or twenty-nine vessels in all. Carter and Wood operated nine new vessels of standard canal size. The Eastern Steamships Company also commenced operations in 1923 with nine new ships. The George Hall Coal and Shipping Corporation had four additional steamships operating between lake ports and Montreal. The Hancock Shipping Company added four steamships to their fleet. The Keystone Transports Limited purchased two new vessels which they operated between lake ports and Montreal, and the Kirkwood Line Limited added the ss. *Torhamvan* to its Great Lakes service. So also a Norwegian fleet of some sixteen steamships made its appearance on the Great Lakes and has added its quota to the problems involved in the whole matter. Pilots of Canadian nationality are taken aboard at Montreal to handle these Norwegian vessels.

It is estimated that four and one-half million passages are taken on Great Lakes vessels alone each season.

A report from the Harbour Commissioners at Toronto shows that in 1923 the total arrivals and departures of vessels of all types for that port was 4,610, the vessel passages for passenger steamships being 3,188.

Records kept at the grain elevators show that in 1923 a total of 1,147 vessels brought cargoes of grain to Montreal from Port Colborne and other lake ports, as compared with 1,125 in 1922.

Similarly records of commerce passing through the Detroit river and the St. Clair Flats canal during 1923 show a total of 26,843 vessel passages as compared with 22,147 for the preceding year.

Statistics of the total lake commerce passing through the canals at Sault Ste. Marie, Mich., and Sault Ste. Marie, Ont., show that for 1923 the total

number of vessel passages was 21,975, as compared with 17,383 for 1922, or an increase of 26 per cent.

It was possible to give more attention this season than in 1923 to conditions in the ports contiguous to the eastern end of lake Erie. Ports such as Fort Erie, Erie Beach, Crystal Beach, Port Colborne and Port Maitland all being visited and conditions noted. Of these, in 1923 it was only possible to make a brief visit to Port Colborne.

Bacteriological reports regarding vessel water supplies were furnished by the United States Public Health Service for the ss. *Canadiana* and ss. *Americana*. These two steamships landed thousands of persons daily at Crystal Beach, Ont. Data of a similar nature has been asked for respecting four other passenger steamships that likewise carry thousands of passengers daily to Fort Erie, Ont., and Erie Beach, Ont.

Brief visits were also made to the terminal ports of vessels engaged in international traffic on lake Ontario and the St. Lawrence river.

Certification of the quality of municipal water supplies at certain Great Lakes ports having been obtained from such authorities as the Provincial Board of Health of the provinces of Quebec and Ontario and the United States Public Health Service for ports in the respective countries, note was made of the facilities available at the docks of ports visited for supply of such water to vessels. In this regard an endeavour has been made to increase the number of points where such shore supplies will be available at the ports of Montreal and Ottawa. The number of ports in Ontario where there are certified municipal water supplies has been increased within the year from eighteen to thirty-two.

The provision for protection of the water supply at the waterworks has been noted at practically every terminal port visited throughout the season.

As during the navigation season of 1923, vessels have been boarded and samples taken from their drinking and culinary systems by Canadian health officials at the ports of Montreal, Toronto, Windsor, Owen Sound, Sault Ste. Marie and Fort William. The reports made as the result of the subsequent analyses have emphasized the necessity for general compliance with the Regulations and have been also a very powerful aid in accomplishing the improvements made to the water systems of various vessels throughout the season.

With regard to the responsibility for the supervision of the supplies of water for drinking and culinary purposes on passenger steamships engaged in other than ferry service on the Great Lakes system, a general division of the traffic is as follows:—

On the lake Ontario-St. Lawrence river routes, the passenger traffic is carried almost entirely by steamships of Canadian register. These vessels obtain their supplies of drinking and culinary water partially from certified sources ashore and partially from overboard en route. As, with only two exceptions, water purification apparatus has not been installed on these passenger steamships, the drinking and culinary water available is subject to contamination, depending on the regularity with which the storage tanks and distributing systems have been flushed and chlorinated.

On lakes Erie and Michigan practically all of the passenger traffic is carried by steamships of United States register. The culinary and drinking water supplies are safeguarded aboard these vessels by water purification apparatus of approved type.

On the lakes Huron-Superior service data supplied by official sources shows that steamships of Canadian register in 1923 carried 66 per cent of the travelling public. By the installation of water purification apparatus of approved type, the careful supervision of its operation, it has been possible to greatly improve the drinking and culinary water supplies on these steamships and bring them to the standard of the regulations.

The typhoid fever rate of a community is generally accepted as furnishing an indication of the sanitary quality of its drinking water and food. Unfor-

tunately it is not easy to obtain statistics of sickness of former passengers after they have left the steamships. The reservation book of a single Great Lakes tourist vessel will frequently carry the names of passengers from points scattered over the area from Halifax to Vancouver. However, a measure of the typhoid fever rate for the crews of vessels is supplied by the records of the hospitals at various Great Lakes ports.

There is a small amount of typhoid which is due to contacts, or contracted by members of crews when ashore, which cannot be attributed to conditions on the vessels. The large number of crews, each constituting its own small community, makes the situation comparable to a rural section, except that there are more dangers to be guarded against on shipboard, such as the presence of several water systems.

In the annual reports of the various Provincial Boards of Health, special reports from hospitals and medical officers of Health at various ports on the Great Lakes system, etc., there is indicated a very definite increase in the number of cases reported as originating on board Great Lakes vessels during the period from 1920 to 1923, with a corresponding decided reduction for the season of navigation 1924, when the Regulations were definitely applied.

That there was an outbreak of typhoid fever at Port Colborne is not surprising when consideration is given to the conditions existing there on August 25.

(a) A fleet of dredges and tugs of the C. S. Boone Dredging and Construction Company stirring up the material previously deposited on the bottom of the ship channel;

(b) Some forty-four men employed on these vessels drop raw sewage into the channel at a comparatively short distance from the water works;

(c) There are frequently ten to fifteen freight carriers in this harbour on which the number of persons employed would average twenty-five; or in other words 250 men adding crude sewage to pollute the waters of the harbour, contrary to the provisions of the "Navigable Waters Protection Act";

(d) Steamships passing through at times discharge sewage and bilge water and also empty their ballast tanks;

(e) Dust from the bins at the elevator is periodically dumped into the waters of the outer harbour;

(f) The effluents from numerous sewage disposal plants are continuously discharging into the harbour;

(g) It is perhaps more than a matter of coincidence that a seaman was landed from the ss. *Canadian Warrior* at this port on July 11, dangerously ill with typhoid fever.

Certain details of the outbreak of typhoid fever at Port Colborne having been discussed, notification was given to all steamship companies operating vessels to that point, that pollution as a result of the practice of discharging crude sewage or other rubbish in the shallow waters of the Welland canal and Port Colborne harbour was contrary to the provisions of the "Navigable Waters Protection Act."

The necessity for the continuance of a check on vessel water supplies even after modern purification equipment has been installed, is well illustrated by the following statement: Owing to unsatisfactory reports from the Health Department of Rochester, N.Y., concerning the quality of water available for drinking and culinary purposes aboard the ss. *Ontario No. 1*, a special visit was made to this steamship. It was found that although the system aboard this vessel is satisfactory, being entirely separate and including a modern type of distilling apparatus and a glass lined storage tank, a member of the crew on several occasions had filled the tank by the fire hose. Removal of the cover of the tank manhole showed that a film of scum had collected on the interior surface of the glass lining and there was also a deposit of silt, etc., on the bottom of the tank.

Throughout the season it was found necessary to send summary notices to clean up the water supply systems of the ss. *Caribou*, *Manitou*, *Bon Ami*, *Michipicoten* and *Cape Trinity*. These steamships were all old offenders and the vessel owners had apparently shown no particular interest in compliance with the regulations. Subsequently the improvements required were made. Also the bacteriological reports show a decided improvement in the quality of the water supplies available aboard these vessels.

This report is in reality a summary of the combined efforts of twelve persons located at the ports of Montreal, Toronto, Windsor, Owen Sound, Sault Ste. Marie, and Fort William, together with data of a special nature supplied by Canadian health officials at points throughout the entire area, as well as the representatives of the United States Public Health Service.

Owing to the lateness of the date at which work was commenced in 1924, it was not possible to enforce section 8 of the regulations.

FINANCIAL STATEMENT

SUMMARY OF EXPENDITURE FOR THE FISCAL YEAR 1924-25

| Service | Gross Expenditure | Refunds | Net Expenditure |
|--|-------------------|----------|-----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Civil Government Salaries..... | 144,942 54 | | 144,942 54 |
| Civil Government Contingencies..... | 51,971 24 | 2,140 28 | 49,830 96 |
| Food and Drugs..... | 79,584 90 | 1,750 52 | 77,834 38 |
| Opium and Narcotic Drugs..... | 12,735 28 | | 12,735 28 |
| Proprietary or Patent Medicines..... | 2,551 10 | | 2,551 10 |
| Pollution of Boundary Waters..... | 5,400 00 | 22 04 | 5,377 96 |
| Marine Hospitals, etc..... | 148,140 96 | 3,153 39 | 144,987 57 |
| Quarantine..... | 174,696 50 | 217 61 | 174,478 89 |
| Leprosy..... | 18,178 45 | | 18,178 45 |
| Public Works Health Act..... | 4,548 89 | 200 00 | 4,348 89 |
| Immigration Medical Inspection..... | 58,904 92 | 509 98 | 58,394 94 |
| Laboratory of Hygiene..... | 5,313 16 | 316 02 | 4,997 14 |
| Veneral Diseases..... | 142,899 22 | | 142,899 22 |
| Public Service Retirement Act, 1920..... | 5,642 34 | | 5,642 34 |
| Canadian Social Hygiene Council..... | 5,000 00 | | 5,000 00 |
| Child Welfare Association..... | 5,000 00 | | 5,000 00 |
| Mental Hygiene Comity..... | 10,000 00 | | 10,000 00 |
| Provisional Bonus Allowance..... | 13,737 20 | | 13,737 20 |
| Gratuities, C. S. Act 1918, Sec. 30..... | 523 33 | | 523 33 |
| | 889,770 03 | 8,309 84 | 881,460 19 |

STATEMENT OF REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL YEAR 1924-25

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|---------------|----------|-------------|
| | \$ cts. | \$ cts. | \$ cts. |
| "A"—Food and Drugs..... | 5,805 00 | | 5,805 00 |
| "B"—Opium and Narcotic Drugs..... | 17,557 19 | 165 00 | 17,392 19 |
| "C"—Patent Medicines..... | 6,741 25 | 548 25 | 6,193 00 |
| "D"—Sick Mariners' Dues..... | 185,999 15 | 1,811 20 | 184,187 95 |
| "E"—Casual Revenue..... | 4,366 25 | | 4,366 25 |
| | 220,468 84 | 2,524 45 | 217,944 39 |

"A"—FOOD AND DRUGS NET REVENUE 1924-25

| | Analysis Fees | Penalties | Costs | Total |
|---------------------------|------------------|-----------|---------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 25 00 | 10 000 | 35 00 |
| New Brunswick..... | 21 00 | | | 21 00 |
| Quebec..... | 16 00 | 475 00 | 140 00 | 631 00 |
| Ontario..... | 3,260 00 | 900 00 | 265 00 | 4,425 00 |
| Manitoba..... | 108 00 | | | 108 00 |
| Alberta..... | 5 00 | 25 00 | 10 00 | 40 00 |
| British Columbia..... | 40 00 | 350 00 | 150 00 | 540 00 |
| Prince Edward Island..... | 5 00 | | | 5 00 |
| | 3,455 00 | 1,775 00 | 575 00 | 5,805 00 |

"B"—OPIUM AND NARCOTIC DRUGS NET REVENUE, 1924-25

| | Business Licenses | Import Licenses | Export Licenses | Penalties | Seizures | Total |
|-----------------------|----------------------|--------------------|--------------------|-----------|----------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 90 00 | | | | | 90 00 |
| New Brunswick..... | 85 00 | | | 450 00 | | 535 00 |
| Quebec..... | 1,090 00 | 560 00 | 25 00 | 2,985 00 | 1,013 42 | 5,673 42 |
| Ontario..... | 1,062 08 | 130 00 | 15 00 | 1,683 70 | | 2,890 78 |
| Manitoba..... | 305 00 | | | 399 19 | | 704 19 |
| Saskatchewan..... | 80 00 | | | 1,624 20 | | 1,704 20 |
| Alberta..... | 100 00 | | | 2,300 00 | | 2,400 00 |
| British Columbia..... | 105 00 | | | 3,259 60 | | 3,364 60 |
| Foreign..... | 25 00 | 5 00 | | | | 30 00 |
| | 2,942 08 | 695 00 | 40 00 | 12,701 69 | 1,013 42 | 17,392 19 |

"C"—PATENT MEDICINES NET REVENUE, 1924-25

| | Penalties | Registration Fees at \$2 each | License Fees at \$1 each | Total |
|---------------------------|-----------|-------------------------------------|--------------------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 12 00 | 42 00 | 54 00 |
| New Brunswick..... | | 14 00 | 101 00 | 115 00 |
| Prince Edward Island..... | | | 1 00 | 1 00 |
| Quebec..... | 145 00 | 332 00 | 1,225 00 | 1,702 00 |
| Ontario..... | | 530 00 | 2,200 00 | 2,730 00 |
| Manitoba..... | | 34 00 | 161 00 | 195 00 |
| Saskatchewan..... | | 40 00 | 35 00 | 75 00 |
| Alberta..... | | 46 00 | 87 00 | 133 00 |
| British Columbia..... | | 28 00 | 156 00 | 184 00 |
| Foreign..... | | 224 00 | 780 00 | 1,004 00 |
| | 145 00 | 1,260 00 | 4,788 00 | 6,193 00 |

"D"—SICK MARINERS' DUES REVENUE, 1924-25

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|----------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 53,000 16 | 438 60 | 52,561 56 |
| New Brunswick..... | 19,360 24 | 72 44 | 19,287 80 |
| Prince Edward Island..... | 582 28 | 7 06 | 575 22 |
| Quebec..... | 52,282 70 | 1,023 34 | 51,259 36 |
| British Columbia..... | 60,773 77 | 269 76 | 60,504 01 |
| | 185,999 15 | 1,811 20 | 184,187 95 |

DEPARTMENT OF HEALTH

"E"—CASUAL REVENUE, 1924-25

| | Total |
|---|----------|
| | \$ cts. |
| Fumigation of ships..... | 1,336 91 |
| Hospital care of passengers..... | 1,571 18 |
| Department of Customs and Excise—Hire of launch <i>Evelyn</i> | 1,117 74 |
| Sundries..... | 340 42 |
| | 4,366 25 |

DOMINION OF CANADA

REPORT

OF THE

DEPARTMENT OF HEALTH

FOR THE

FISCAL YEAR ENDED MARCH 31, 1926



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1926

*To General His Excellency the Right Honourable Lord Byng of Vimy, G.C.B.,
G.C.M.G., M.V.O., Governor General and Commander in Chief of the
Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit, herewith, for the information of Your Excellency and the Parliament of Canada, the Annual Report of the Department of Health, being for the year ended March 31, 1926.

I have the honour to be, sir,

Your Excellency's most obedient servant,

H. S. BELAND,
Minister of Health.

OTTAWA, April 10, 1926.

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REPORT

OF THE

DEPARTMENT OF HEALTH

FOR THE FISCAL YEAR ENDED MARCH 31, 1926

OTTAWA, April 4, 1926.

Hon. H. S. BÉLAND, M.D.,
Minister of Health,
Ottawa.

SIR,—I have the honour to report on the Department of Health for the year ended March 31, 1926, under the following headings:

1. Quarantine Service (including Leper Stations).
2. Immigration Medical Service.
3. Marine Hospitals Service.
4. Venereal Disease Control.
5. Narcotic Division.
6. Proprietary or Patent Medicines.
7. Child Welfare.
8. Food and Drugs Division.
9. Laboratory of Hygiene.
10. Public Works Health Act.
11. Hospitalization and Sanitation.
12. Pollution of the Inland Waters of Canada.
13. Financial Statement.

J. A. AMYOT,
Deputy Minister of Health.

QUARANTINE SERVICE

The following organized quarantine stations were maintained during the fiscal year:

Province of Quebec.—Grosse Isle in the river St. Lawrence (with Father Point as the inspecting base); with Quebec and Montreal Harbours as substations.

Province of Nova Scotia.—(a) Halifax, the Harbour and Lawlor's Island;
(b) Sydney, North Sydney, the Harbour and Point Edward.

Province of New Brunswick. St. John, the Harbour and Partridge Island.

Province of British Columbia. Victoria, the Harbour and William Head; with Vancouver and the Harbour as a substation.

Each organized quarantine station and substation is in charge of a medical officer.

A substation is a port of final destination where vessels, when empty, can, with greater facility, be fumigated or disinfested, and where other functions may, when required, be performed, as directed by the minister.

The following table shows the number of vessels and personnel inspected at the several stations:

| Station | Vessels inspected | Passengers | | | Crews | Cattle-men | Stow-aways | Dis-tressed seamen, etc. | Total persons in-spected |
|---|-------------------|-------------|-------------|-------------|---------|------------|------------|--------------------------|--------------------------|
| | | First class | Cabin class | Third class | | | | | |
| <i>Province of Quebec—</i> Father Point..... | 1,049 | 2,927 | 29,303 | 51,530 | 79,697 | 929 | 105 | ..... | 164,491 |
| <i>Province of Nova Scotia—</i> Halifax..... | 454 | 4,028 | 32,439 | 53,341 | 60,999 | 5 | 36 | 11 | 150,859 |
| North Sydney..... | 81 | ..... | ..... | 2 | 2,504 | ..... | 1 | ..... | 2,507 |
| <i>Province of New Bruns- wick—</i> St. John..... | 334 | 935 | 2,508 | 15,245 | 20,237 | 370 | 14 | 13 | 39,322 |
| <i>Province of British Colum- bia—</i> William Head..... | 819 | 5,252 | 2,885 | 13,353 | 62,196 | 1 | 22 | ..... | 83,709 |
| Totals..... | 2,737 | 13,142 | 67,135 | 133,471 | 225,633 | 1,305 | 178 | 24 | 440,888 |

Persons to the number of 84 were detained at quarantine stations. Of these, 24 were sick with quarantinable, suspected quarantinable, or minor infectious disease; the remaining 60 were either detained for medical observation as contacts of the respective diseases or were members of families accompanying the sick, from whom they could not well be separated.

In considering these figures it should be noted that, in line with the practice obtaining in other countries of the world, it is the policy of the department, so soon as adequate facilities can be afforded, to land all minor infectious cases, such as measles, chickenpox, scarlet fever, etc., direct at the port of arrival, for treatment in immigration or city hospitals, reserving the quarantine hospitals for the treatment of the major diseases—smallpox, plague, yellow fever, etc. Accordingly, all minor infectious cases found on vessels coming up the St. Lawrence river are now landed at Quebec and treated at the Savard Park immigration hospital. Also, at the port of Halifax, commencing January 31, 1926, minor infectious cases hitherto detained at the Lawlor's Island quarantine station, were treated in the immigration hospital at Rockhead. This practice will be continued during the winter season each year, when the number of vessels disembarking passengers at Halifax is at a maximum and ice conditions in the harbour at times render Lawlor's Island difficult of access. During the summer months, however, when the main flow of immigration is diverted to the St. Lawrence ports, it is felt that the comparatively small number of minor infectious cases likely to be landed at Halifax would not be sufficient to justify keeping the Rockhead hospital in operation. Such cases will, therefore, from May to November, continue as heretofore to be treated at the Lawlor's Island quarantine hospital.

The minor infectious cases treated at Savard Park and Rockhead are reported under the Immigration Medical Service Division.

The only major quarantinable disease occurring during the year were four cases of smallpox at William Head, two of whom died.

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY STATIONS

| Station | Sick | Hospital days | Contacts and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|-------------------------------------|------|---------------|--|--------------------------|------------------------|---|
| Halifax, N.S. (Lawlor's Island)... | 12 | 136 | 24 | 210 | 36 | 346 |
| St. John N.B. (Partridge Island)... | 6 | 28 | 14 | 63 | 20 | 91 |
| Victoria, B.C. (William Head)... | 6 | 103 | 22 | 227 | 28 | 330 |
| Totals..... | 24 | 267 | 60 | 500 | 84 | 767 |

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY DISEASES

| Diagnosis | Sick | Hospital days | Contacts (detained for observation) and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|------------------------------|------|---------------|---|--------------------------|------------------------|---|
| Chickenpox..... | 4 | 58 | 7 | 89 | 11 | 147 |
| *Coryza..... | 1 | 5 | 2 | 10 | 3 | 15 |
| *Gastro-enteritis..... | 1 | 4 | ..... | ..... | 1 | 4 |
| Influenza..... | 1 | 8 | ..... | ..... | 1 | 8 |
| *Intestinal obstruction..... | 1 | 2 | ..... | ..... | 1 | 2 |
| Measles..... | 9 | 64 | 25 | 126 | 34 | 190 |
| Mumps..... | 1 | 4 | 2 | 8 | 3 | 12 |
| Scarlet fever..... | 1 | 37 | 2 | 50 | 3 | 87 |
| Smallpox..... | 4 | 79 | 21 | 211 | 25 | 290 |
| Tonsillitis..... | 1 | 6 | 1 | 6 | 2 | 12 |
| Totals..... | 24 | 267 | 60 | 500 | 84 | 767 |

*Cases marked were admitted to Quarantine for observation, subsequent diagnosis being as stated.

COMPULSORY FUMIGATION OF SHIPS

Under section 37 of the Quarantine Regulations, all vessels other than coast-wise, arriving at quarantine stations in Canada must produce a certificate showing date of last fumigation. Where more than six months have elapsed since last fumigation (in the case of certain modern types of vessels this period has now been extended to twelve months) the vessel is ordered to be fumigated at the Canadian port of destination before being permitted to put to sea again.

Facilities for fumigating ships, either by the cyanide or sulphur method, are now available at the ports of Halifax, St. John, Quebec, Montreal, Vancouver, and Victoria. In every case this work is carried out under the supervision of a duly qualified medical officer of the department.

The following statement shows the number of vessels fumigated at the ports named:—

| | |
|----------------|------------|
| Halifax..... | 34 |
| St. John..... | 17 |
| Quebec..... | 3 |
| Montreal..... | 93 |
| Vancouver..... | 191 |
| Victoria..... | 3 |
| Total..... | <u>341</u> |

LABORATORIES

The policy was initiated during the fiscal year of placing the laboratories at the quarantine stations under the direction and supervision of Dr. Norman MacL. Harris, Chief of the Departmental Laboratory of Hygiene.

The following extracts are from reports received from the respective quarantine officers:—

Grosse Isle, Quebec (Medical Superintendent, Dr. G. E. Martineau):—

“There were 1,049 vessels granted quarantine clearance during the season, being an increase as compared with last season, of 105 boats. This marks a new record for the St. Lawrence river.

“Of these, 170, or 16 per cent, were passenger vessels, being a decrease of sixteen as compared with last year. These vessels were cleared at Father Point with the exception of twelve. Of these latter, eleven were cleared at Quebec, and one at Montreal. The reasons for not clearing at Father Point were as follows: One arrived before the inspection boat was on the Station; one did not stop at Father Point for either pilot or pratique; one passed through error of your officer; the remaining nine were able to take pilots but not the medical officer, on account of gales.

“Sickness of an infectious nature, or suspected of being such, was reported or discovered during inspection on sixty-three occasions.

“Only minor infectious diseases were found as follows: Measles, scarlet fever, Rothelm, mumps, varicella, whooping cough, enteric fever, diphtheria and febricula.

“Deaths were reported by fourteen vessels due to the following causes: Lost overboard; cause unknown; Bright's disease; accident; pneumonia; tuberculosis; and result of brawl among the crew.

“Births were reported four times.

“Four times vessels, numbering eleven, were detained by fog or gales, but your officers were able to clear these vessels when they got their pilots.

“No cases of major quarantinable diseases being found on board vessels, only two persons were admitted to the Grosse Isle hospital last season, viz., one child refusing vaccination, accompanied by mother, making a total of fourteen hospital days.

“As usual the members of the staff occupied most of their time in keeping the different buildings in good state of repair. Much painting and many minor repairs were so carried out both at Father Point and Grosse Isle; but, unfortunately, the medical superintendent's residence and office at Grosse Isle were destroyed by fire on November 19 last, the origin of fire being unknown.”

Lawlor's Island, Halifax, N.S. (Quarantine Officer, Dr. Judson V. Graham):—

“Among the 454 vessels inspected at this station, ten deaths and four births at sea were reported. The deaths were classified as follows:—

“Apoplexy, 1; pneumonia, 2; acute gastritis, 1; pulmonary infarction, 1; organic heart disease, 4; drowning, 1.

"The transfer of minor infectious cases to Rockhead immigration hospital was commenced on January 31, following advice from Dr. Gouthro (Immigration Medical Officer) that he was ready to receive them.

"Of the thirty-four vessels fumigated at this station during the year, twenty-seven were steamships, six were schooners, and one a motorship. Dead rats were recovered after fumigation on eighteen of the vessels to the number of 313. Three vessels fumigated sailed before proper search could be made for dead rats.

"No persons were vaccinated at Quarantine excepting members of the station staff."

William Head, B.C. (Quarantine Officer, Dr. C. P. Brown):—

"A comparison of the traffic with that of previous years might be of interest. Vessels inspected as shown by yearly reports: 1926, 819; 1925, 716; 1924, 427; 1923, 285. This is an increase of 2.87 times in four years. Inspections of the returns show that the increase now taking place is in the freighting traffic.

"Inspection on request at night has been in force throughout the year and is apparently giving satisfaction. There are very few boats that wait until sunrise.

"Vessels engaged exclusively in the coastwise trade as between ports in Newfoundland, St. Pierre and Miquelon, Eastern Canada, Eastern United States, Panama Canal, Western United States and British Columbia are exempted from quarantine inspection by both Canada and the United States. This has obtained with us since September 8, 1926. At this station we interpret the term 'exclusively coastwise' to mean the return of a vessel from its first round trip commencing at a British Columbia port, and to continue as such until it calls at other foreign port than those enumerated above. This ruling has released a large and growing traffic from quarantine inspection.

"The United States quarantine authorities, by arrangement with Ottawa, now recognize Canadian fumigation certificates, when vised by United States Consuls.

"The classification of New Orleans, Los Angeles, and Oakland as infected with rat plague was withdrawn on September 4, 1925.

"A beginning has been made to organize definite anti-rat measures for the Harbour of Vancouver, as a protection against the introduction of plague, and to bring it into conformity with the international custom in such matters. This has been the subject of special reports throughout the year.

"Smallpox has been very widespread, but only in epidemic, virulent form in Los Angeles, Seattle, Shanghai, and Yokohama. One vessel brought four cases, two of whom died. It came from Shanghai via Muroran. Three other vessels had had smallpox on board during the voyage.

"Cholera was prevalent on the Asiatic coast. Manila, Shanghai, Yokohama, Kobe, and Osaka reported it, Manila the longest.

"During the year we were informed by the department that arrangements were being made to have a full-time medical officer in Vancouver. He will represent the department in the work for Vancouver harbour as outlined above. This will entail the cyanogen chloride fumigation of ships, examination of the rats found, and co-operation with the provincial and city authorities. Dr. H. P. Cox, formerly assistant medical officer at this station, was later appointed to this position.

"There have been no other changes in staff during the year.

"The Public Works Department, Architects Branch, constructed two new cottages at Bentinck Island and installed an electric lighting and pumping system during the year.

"The Engineers Branch of the Public Works Department carried out very extensive repairs to the small wharf, as well as some new breast piles at the large wharf.

"Only routine repairs to buildings here have been carried out, our staff doing the work, the Public Works Department supplying materials.

"All parts of the station have been kept ready for use at all times, except such portions as from time to time have been actually under process of repair. The *Madge* had to be sent into the Navy Yard once for emergency repairs."

VESSELS' DESTINATION

| | |
|--|-------------|
| Vancouver..... | 470 = (57%) |
| Victoria..... | 255 = (31%) |
| New Westminster..... | 41 = (5%) |
| Nanaimo..... | 18 = (2%) |
| Powell River..... | 6 |
| Comox, Wood Fibre..... | 4 each |
| Port Alice, Sidney, Nanoose Bay..... | 3 each |
| Swanson Bay, Barnett..... | 2 each |
| Port Alberni, Union Bay, Ocean Falls, Beaver Cove, Ladysmith, Port Moody, Charlotte City, Genoa Bay..... | 1 each |

VESSELS' NATIONALITY

| | |
|-----------------|-------------|
| British..... | 312 = (34%) |
| U.S.A..... | 191 = (24%) |
| Japanese..... | 180 = (22%) |
| Norwegian..... | 41 = (5%) |
| French..... | 21 = (2.5%) |
| Dutch..... | 18 |
| Danish..... | 16 |
| Swedish..... | 14 |
| German..... | 11 |
| Italian..... | 7 |
| Belgian..... | 3 |
| Greek..... | 2 |
| Panamaian..... | 1 |
| Mexican..... | 1 |
| Nicaraguan..... | 1 |

WHERE FROM

| | |
|--|-------------|
| Orient..... | 289 = (35%) |
| Canadian, Newfoundland and United States ports..... | 230 = (28%) |
| Northern Europe and Mediterranean, including Italy and West..... | 206 = (25%) |
| Australasia..... | 47 = (6%) |
| South and Central America..... | 44 = (5%) |
| Eastern Mediterranean and Africa (Port Said)..... | 3 |

TIME OF INSPECTION

| | | | |
|--------------|--------------|-----------------|-------------|
| Daytime..... | 533 = (65%). | Night-time..... | 285 = (35%) |
|--------------|--------------|-----------------|-------------|

| | |
|--|----------------------|
| Vessels bringing bills of health showing quarantinable disease existing at ports of departure..... | 499 = (61% of total) |
| Vessels ordered fumigation..... | 54 |
| Vessels fumigated..... | 3 |
| Vessels quarantined..... | 1 |
| Vaccinations..... | 106 |

Smallpox shown on bills of health present in virulent form at Los Angeles, Seattle, Shanghai, Yokohama.

Rat plague shown at Los Angeles, New Orleans, Oakland, Honokaa (an Island remote from Honolulu)
Cholera shown at Shanghai, Manila, Yokohama, Kobe, Hagasaki, Osaka.

LABORATORY WORK

| | |
|-------------------------------------|----|
| Total specimens..... | 59 |
| Stained smears..... | 58 |
| Urine..... | 1 |
| Smears stained for Bac. Leprae..... | 58 |
| Positive..... | 20 |
| Negative..... | 38 |

Of these two were smears from curetting wall of sinus, both negative. One was from nodule juice, positive.

In nine cases smears were made by acupuncture of the ear lobe and by curetting the nasal septum. All were negative by the acupuncture method. Six were positive by nasal smear method. Three were negative by nasal smear method.

LEPER STATIONS

Under the Leprosy Act (chapter 136, Revised Statutes, 1906) the Department of Health administers two leper stations in Canada, one at Tracadie, the other at Bentinck Island.

Tracadie, N.B.—This lazaretto is in charge of Dr. J. A. Langis, medical superintendent. At the end of the fiscal year, March 31, 1926, there were ten inmates being cared for, six of whom, however, are arrested cases. The oldest patient is eighty, the youngest twenty-six years old. One death occurred during the year, and there was one new admission—a Chinese resident of Montreal; thus the number of inmates remains the same as in the previous year. These are classified below:—

| Patient | Age | Sex | Admitted | Nationality | Where from |
|--------------|-----|-----|----------------------|--------------------------------|---------------------|
| J. G..... | 61 | M | April, 1897..... | Icelander..... | Winnipeg, Man. |
| J. S..... | 57 | F | March, 1906..... | French Acadian..... | Tracadie, N.B. |
| P. D..... | 39 | M | May, 1909..... | French Acadian..... | Lameque, N.B. |
| O. L..... | 80 | M | October, 1910..... | French Acadian..... | Neguae, N.B. |
| B. T..... | 73 | F | October, 1914..... | French Acadian..... | Portage River, N.B. |
| A. D..... | 27 | F | July, 1918..... | French Acadian..... | Lameque, N.B. |
| J. de L..... | 65 | M | April, 1919..... | French Acadian..... | Lameque, N.B. |
| V. de L..... | 26 | F | January, 1921..... | Scotch and French descent..... | Toronto, Ont. |
| K. S. J..... | 44 | M | October, 1922..... | Chinese..... | Montreal, P.Q. |
| W. S..... | 35 | M | September, 1925..... | Chinese..... | Montreal, P.Q. |

It will be noted that of the ten inmates six are French-Acadians. These are natives of Gloucester county, N.B., where leprosy first made its appearance in Canada. It is interesting to note that the last leper case which occurred in this district was admitted to the lazaretto seven years ago, thus it may be assumed that leprosy having its origin among the Canadian people is to-day virtually extinct. Had it not been that two Chinese admitted to the lazaretto in recent years died prematurely, the number of foreign-born lepers at the Tracadie institution to-day would be equal to that of the native-born. At one time, in 1897, there were as many as twenty-seven lepers in the institution.

The principal medicinal treatment of the active cases consists of the intramuscular injection of the ethyl esters of chaulmoogra oil, which oil is obtained from the seed of an East Indian tree. Dr. Langis reports as satisfactory progress as can be expected, and pays tribute to the devoted service to the inmates rendered by the nursing sisters of the Order of St. Joseph.

Bentinck Island, B.C.—This leper station is in charge of Dr. C. P. Brown, medical superintendent of the quarantine station at William Head, B.C., to which Bentinck Island is adjacent. At the close of the fiscal year there were ten male patients being cared for, as compared with nine the previous year. These are classified as follows:—

| Patient | Age | Sex | Admitted | Nationality | Where from |
|--------------|-----|-----|------------------------|------------------|-----------------|
| F. H..... | 40 | M | August 28, 1916..... | Chinese..... | Vancouver, B.C. |
| C. K. W..... | 41 | M | October 4, 1918..... | Chinese..... | Vancouver, B.C. |
| L. A..... | 29 | M | November 28, 1918..... | Chinese..... | Victoria, B.C. |
| L. B..... | 35 | M | December 23, 1920..... | Chinese..... | Vancouver, B.C. |
| A. B..... | 49 | M | November 18, 1921..... | Russian Jew..... | Winnipeg, Man. |
| C. K..... | 46 | M | March 31, 1922..... | Chinese..... | Victoria, B.C. |
| L. J..... | 30 | M | August 5, 1923..... | Chinese..... | Vancouver, B.C. |
| E. D..... | 32 | M | January 31, 1924..... | Doukhobor..... | Veregin, Sask. |
| M. J..... | 29 | M | May 21, 1924..... | Chinese..... | Vancouver, B.C. |
| W. K. D..... | 41 | M | October 28, 1925..... | Chinese..... | Nanaimo, B.C. |

Dr. Brown reports that the new patient is progressing favourably. Of the old patients, the condition of one is retrogressing in spite of treatment; the condition of the others remains practically unchanged. Medicinal treatment consists of chaulmoogra oil capsules, with "Moogrol" injected intramuscularly.

The lepers are housed in cottages, each with his own room and outfit, and look after themselves as far as practicable. Two male caretakers and a trained female nurse are in immediate charge of the leper colony, under the supervision of the quarantine medical officer, who visits the island at weekly intervals or oftener if needed.

IMMIGRATION MEDICAL SERVICE

Ocean passengers, immigrant and non-immigrant (tourists, etc.) to the number of 87,130 were medically inspected at ports of Canada on the Atlantic and Pacific coasts during the fiscal year. In addition, 2,069 persons en route to Canada by way of the ports of New York and Boston were medically inspected by officers of the United States Public Health Service.

The following tables show (a) the monthly arrivals by ports, and (b) a comparison with the figures of the previous fiscal year.

The following table shows the number of persons medically certified at the respective ports as prohibited of entry to Canada under section 3 of the Immigration Act:—

| — | Insane, feeble- minded etc. Section 3 (a) | Tuber- culosis, loathsome or chronic infectious disease. Section 3 (b) | Physically defective liable to become a public charge. Section 3 (c) | Constitu- tional psycho- pathic inferiority. Section 3 (k) | Chronic alcoholism. Section 3 (l) | Minor physical defects affecting ability to earn a living. Section 3 (m) | Totals |
|-----------------|--|---|---|--|--|---|--------|
| Quebec..... | 11 | 9 | 380 | 1 | 1 | 46 | 448 |
| Halifax..... | 3 | 4 | 67 | | | 13 | 87 |
| St. John..... | 4 | 2 | 77 | | | 1 | 84 |
| Montreal..... | | 1 | 3 | | | | 4 |
| North Sydney... | 2 | 1 | 6 | | | | 9 |
| Vancouver..... | 1 | | 2 | 1 | | | 4 |
| Victoria..... | | 1 | | | | 1 | 2 |
| Totals..... | 21 | 18 | 535 | 2 | 1 | 61 | 638 |

Tables below show, by ports, the specific mental and physical diseases or defects for which these persons were medically certified:—

IMMIGRATION ACT, SECTION 3 (a) AND (k)—PERSONS MENTALLY DEFECTIVE

| Disability | Quebec | Halifax | St. John | North Sydney | Van- couver | Totals |
|--|--------|---------|----------|-----------------|----------------|--------|
| Section 3 (a)— | | | | | | |
| Imbecility..... | | | | 1 | | 1 |
| Feeble-mindedness..... | 4 | 1 | 3 | 1 | | 9 |
| Epilepsy..... | 2 | 1 | | | | 3 |
| Insanity..... | 5 | 1 | 1 | | 1 | 8 |
| Section 3 (k)— | | | | | | |
| Constitutional psychopathic inferiority..... | 1 | | | | 1 | 2 |
| Totals..... | 12 | 3 | 4 | 2 | 2 | 23 |

IMMIGRATION ACT, SECTION 3 (b)—PERSONS AFFECTED WITH TUBERCULOSIS, LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | Halifax | St. John | Mont- real | North Sydney | Victoria | Totals |
|-------------------|--------|---------|----------|---------------|-----------------|----------|--------|
| Gonorrhœa..... | 2 | 1 | | 1 | | | 4 |
| Ringworm..... | 1 | | | | | | 1 |
| Syphilis..... | | | 1 | | | | 1 |
| Trachoma..... | 4 | | | | | 1 | 5 |
| Tuberculosis..... | 2 | 3 | 1 | | 1 | | 7 |
| Totals..... | 9 | 4 | 2 | 1 | 1 | 1 | 18 |

IMMIGRATION ACT, SECTION 3 (c) AND (m)—PERSONS PHYSICALLY DEFECTIVE

| Defects | Quebec | Halifax | St. John | Mont- real | North Sydney | Van- couver | Victoria | Totals |
|----------------------------------|--------|---------|----------|---------------|-----------------|----------------|----------|--------|
| Absence of members..... | 35 | 5 | 10 | 1 | 1 | | | 52 |
| Aneurysm..... | | | 1 | | | | | 1 |
| Appendicitis..... | | 1 | | | | | | 1 |
| Blindness, total or partial..... | 2 | 1 | 1 | | | | | 4 |
| Blood vessels, defects of..... | 33 | 2 | 3 | | | | | 38 |
| Bone, diseases of..... | | 1 | | | | | | 1 |
| Bronchitis, chronic..... | | | | 1 | | | | 1 |
| Chest, diseases of..... | 8 | | | | | | | 8 |
| Deafness, total or partial..... | 22 | 3 | 6 | | | | | 31 |
| Deaf and dumb..... | 2 | 1 | | | | 1 | | 4 |
| Debility..... | 2 | 3 | | | | | *1 | 6 |
| Deformities..... | 64 | 16 | 17 | | 1 | | | 98 |
| Dermatitis..... | 2 | 1 | | | | | | 3 |
| Glandular conditions..... | 1 | | | | | | | 1 |
| Goitre, exophthalmic..... | 4 | 1 | | | | | | 5 |
| Heart conditions..... | 46 | 4 | 7 | | 1 | 1 | | 59 |
| Hernia..... | 36 | 10 | 2 | 1 | | | | 49 |
| Hydrocele..... | 3 | | 2 | | | | | 5 |
| Joints, diseases of..... | 1 | | | | | | | 1 |
| Loss of power of members..... | 39 | 10 | 5 | | | | | 54 |
| Malaria recurring..... | 4 | | | | | | | 4 |
| Nephritis..... | 1 | | | | | | | 1 |
| Neurasthenia..... | | 1 | 2 | | | | | 3 |
| New Growths..... | 1 | | | | | | | 1 |
| Paralysis, facial..... | 1 | 1 | | | | | | 2 |
| Poor physique..... | 2 | 4 | 3 | | 1 | | | 10 |
| Pregnancy, illegitimate..... | 3 | | | | 1 | | | 4 |
| Rheumatism..... | 5 | 1 | 1 | | | | | 7 |
| Senility..... | | 12 | 3 | | | | | 15 |
| Speech, defects of..... | 11 | | 1 | | | | | 12 |
| Vision, defects of..... | 98 | 2 | 14 | | 1 | | | 115 |
| Totals..... | 426 | 80 | 78 | 3 | 6 | 2 | 1 | 596 |

* Died.

The following table has reference to ocean passengers (immigrant and non-immigrant) who, on arrival at the Canadian ports named, were detained for medical or surgical treatment until they were cured or fit to travel. The list includes those persons detained at the Savard Park Immigration Hospital, Quebec, and the Rockhead Immigration Hospital, Halifax, on account of minor infectious disease.

| Treated for | Quebec | Halifax | St. John | Montreal | Vancouver | Totals |
|--------------------------|--------|---------|----------|----------|-----------|--------|
| Abscesses..... | 6 | 8 | | | | 14 |
| Albuminuria..... | 1 | | | | | 1 |
| Appendicitis..... | 1 | | | | | 1 |
| Ascites..... | 1 | | | | | 1 |
| Blepharitis..... | 1 | | | | | 1 |
| Bronchitis..... | 5 | 4 | 1 | | | 10 |
| Cellulitis..... | | 4 | 1 | | | 5 |
| Cervical adenitis..... | 1 | | | 1 | | 2 |
| Chickenpox..... | 5 | 1 | | | | 6 |
| Childbirth..... | 3 | 2 | 1 | | | 6 |
| Conjunctivitis..... | 12 | 2 | | | 1 | 15 |
| Constipation..... | 1 | | | | | 1 |
| Contusion..... | | 1 | | | | 1 |
| Coryza..... | 2 | | | | | 2 |
| Debility..... | | 1 | | | | 1 |
| Dermatitis..... | 2 | | | | | 2 |
| Diphtheria..... | 3 | | | | | 3 |
| Eczema..... | 1 | | 1 | | | 2 |
| Erysipelas..... | 1 | | 1 | | | 2 |
| Eye, diseases of..... | 3 | 6 | | | | 9 |
| Food rash..... | 1 | | | | | 1 |
| Fractures..... | 2 | 2 | 1 | | | 5 |
| Furunculosis..... | 5 | | | | | 5 |
| Gastritis..... | 2 | | | | | 2 |
| Herpes..... | 2 | | | | | 2 |
| Impetigo..... | 9 | | 1 | | | 10 |
| Indigestion..... | | 2 | | | | 2 |
| Infected members..... | 4 | | 1 | | | 5 |
| Influenza..... | | 11 | 1 | | | 12 |
| Intestinal toxemia..... | 3 | | | | | 3 |
| Laryngitis..... | | | 1 | | | 1 |
| Malaria..... | 1 | | | | | 1 |
| Measles..... | †23 | 5 | | 1 | | 29 |
| Mumps..... | 12 | 1 | | | | 13 |
| Neuralgia..... | 1 | | | | | 1 |
| Osteomyelitis..... | | | | | 1 | 1 |
| Otitis media..... | 1 | | 1 | 1 | | 2 |
| Paratyphoid..... | 1 | | | | | 1 |
| Peritonitis..... | *2 | | | †1 | | 3 |
| Pernicious vomiting..... | | 1 | | | | 1 |
| Pharyngitis..... | | 1 | 1 | | | 2 |
| Phlegmon..... | 1 | | | | | 1 |
| Pleurisy..... | 2 | | | | | 2 |
| Pneumonia..... | | 10 | 4 | | 1 | 15 |
| Pyrexia..... | | 2 | | | | 2 |
| Quinsy..... | | | 1 | | | 1 |
| Rheumatism..... | | 1 | | | | 1 |
| Ringworm..... | 1 | | | | | 1 |
| Scabies..... | 1 | | | | | 1 |
| Scalds..... | 1 | | | | | 1 |
| Scarlet fever..... | *3 | 1 | | | | 3 |
| Seasickness..... | | 1 | | | | 1 |
| Skin diseases..... | | 8 | | | | 8 |
| Sprain..... | 1 | | | | | 1 |
| Sycosis simplex..... | 1 | | | | | 1 |
| Thrush..... | 1 | | | | | 1 |
| Tinea circinata..... | 1 | | | | | 1 |
| Tonsillitis..... | 5 | 1 | 1 | | | 7 |
| Typhoid fever..... | 1 | | | | | 1 |
| Ulcerations..... | 3 | | | | | 3 |
| Wounds..... | 2 | | | | | 2 |
| Totals..... | 141 | 75 | 18 | 4 | 3 | 241 |

† 1 died.

* 2 died.

Of the immigrant and non-immigrant ocean passengers detained for a closer medical examination than could be afforded during line inspection, on account of suspected mental or physical conditions, the following were respectively either (a) released as not coming within the "prohibited classes" set out in section 3 of the Immigration Act or were (b) recorded as having minor defects only:—

(a) PERSONS DETAINED FOR MEDICAL OBSERVATION BUT SUBSEQUENTLY RELEASED AS "NEGATIVE"

| Cause for which detained | Quebec | Halifax | St. John | Victoria |
|----------------------------|--------|---------|----------|----------|
| Observation, abortion..... | 1 | 1 | | |
| " chest | 5 | | | |
| " chicken pox | 7 | | | |
| " eyes | | 9 | | 1 |
| " face | | 1 | | |
| " fracture of skull | 1 | | | |
| " general | 17 | 14 | 1 | |
| " measles | 22 | | | |
| " mental | 15 | 3 | 3 | |
| " mumps | 11 | | | |
| " nails | 2 | 5 | | |
| " scalp | 1 | | 2 | |
| " scarlet fever | 4 | | | |
| " skin | 2 | 2 | | |
| " throat | 2 | | | |
| Totals | 90 | 35 | 6 | 1 |

(b) CASES RECORDED FOR MINOR DEFECTS

| | |
|---------------|-----|
| Quebec..... | 527 |
| Halifax..... | 105 |
| St. John..... | 71 |
| Total..... | 703 |

IMMIGRATION MEDICAL SERVICE OVERSEAS

Of the 22,099 prospective emigrants to Canada who submitted medical certificates from roster doctors for review by the Canadian Immigration medical officers in London, or were examined personally by the latter officers, 1,929 were found to come within the prohibited classes set out in section 3 of the Immigration Act, due to physical or mental defects. The following tabulated statement enumerates the diseases or defects for which these people were "certified". Final decision as to their acceptance or rejection as emigrants to Canada rests with the Department of Immigration, the officers of the Department of Health merely acting as medical advisers.

| | |
|---|--------|
| Medical certificates from roster doctors reviewed | 22,099 |
| Examinations personally conducted by immigration medical advisers | 1,481 |

LIST OF CERTIFICATIONS UNDER IMMIGRATION ACT

SECTION 3 (a)

| | |
|-------------------------|-----|
| Epilepsy..... | 15 |
| Feeble-minded..... | 104 |
| Idiocy..... | 2 |
| Insane..... | 1 |
| Imbecility..... | 7 |
| Hallucinations | 1 |
| Mania | 1 |
| Melancholia..... | 1 |
| Previously insane | 15 |
| Senile dementia..... | 1 |
| Total..... | 148 |

DEPARTMENT OF HEALTH

SECTION 3 (b)

| | |
|----------------------------------|-----|
| Eczema, chronic..... | 1 |
| Favus..... | 2 |
| Psoriasis..... | 2 |
| Ringworm..... | 12 |
| Sycosis barbae..... | 2 |
| Trachoma..... | 132 |
| Tuberculosis, adenitis..... | 16 |
| " iritis..... | 1 |
| " lupus..... | 7 |
| " pulmonary..... | 27 |
| " surgical..... | 14 |
| Venereal disease, gonorrhœa..... | 2 |
| " syphilis..... | 7 |
| Total..... | 225 |

SECTION 3 (k)

| | |
|--|----|
| Constitutional psychopathic inferiority..... | 23 |
|--|----|

SECTION 3 (l)

| | |
|-------------------------|---|
| Chronic alcoholism..... | 1 |
|-------------------------|---|

SECTION 3 (c)

| | |
|---------------------------------|-------|
| Absence of members..... | 29 |
| Amenorrhœa..... | 1 |
| Anaemia..... | 13 |
| Blindness..... | 4 |
| Blood vessels, defects of..... | 35 |
| Bone, diseases of..... | 15 |
| Chest conditions..... | 58 |
| Chorea..... | 1 |
| Deafness..... | 65 |
| Deaf and dumb..... | 14 |
| Debility..... | 56 |
| Deformities..... | 208 |
| Dercun's disease..... | 1 |
| Dermatitis..... | 38 |
| Diabetes..... | 1 |
| Disseminated sclerosis..... | 2 |
| Ear, diseases of..... | 25 |
| Enuresis..... | 10 |
| Epileptiform seizures..... | 1 |
| Fracture, skull, depressed..... | 1 |
| Goitre..... | 11 |
| Heart conditions..... | 243 |
| Hydrocele..... | 2 |
| Indigestion, chronic..... | 1 |
| Iritis..... | 1 |
| Joints, diseases of..... | 3 |
| Loss of power of members..... | 22 |
| Malaria..... | 1 |
| Nephritis..... | 15 |
| Neurasthenia..... | 41 |
| New growths..... | 3 |
| Obesity..... | 3 |
| Poor physique..... | 88 |
| Pregnancy..... | 8 |
| Prolapsus uteri..... | 2 |
| Pyuria..... | 1 |
| Rheumatism..... | 24 |
| Senility..... | 3 |
| Speech, defects of..... | 19 |
| Syphilis, tertiary..... | 1 |
| Vision, defects of..... | 157 |
| Total..... | 1,227 |

SECTION 3 (m)

| | |
|---------------|-----|
| Mental..... | 15 |
| Physical..... | 290 |
| Total..... | 305 |

MARINE HOSPITALS SERVICE

The Marine Hospitals Service is operated in conformity with the provisions of chapter 38, Canada Shipping Act (Sick and Distressed Mariners).

During the year the department operated two marine hospitals, namely at Sydney and Lunenburg in the province of Nova Scotia. At the larger ports contracts were made with the local hospitals for the treatment of sick sailors at fixed per diem rates. At ports of lesser importance the department operated emergency hospitals, and at smaller outports satisfactory arrangements were made for their care and treatment through the agency of the collectors of customs. The following is a list of the hospitals which were under contract with this department during the year 1925-26:—

NOVA SCOTIA

| | |
|-------------------|---|
| Amherst..... | Highland View Hospital |
| Antigonish..... | St. Martha's Hospital |
| Bridgewater..... | Dawson Memorial Hospital |
| Glace Bay..... | St. Joseph's Hospital |
| Halifax..... | Victoria General Hospital |
| | City Health Board (Contagious diseases) |
| | Tuberculosis Hospital |
| Kentville..... | Nova Scotia Sanatorium (Tuberculosis) |
| Middleton..... | Soldiers' Memorial Hospital |
| New Glasgow..... | Aberdeen Hospital |
| North Sydney..... | Hamilton Memorial Hospital |
| Pictou..... | Pictou Memorial Hospital |
| Springhill..... | Springhill Cottage Hospital |
| Windsor..... | Payzant Memorial Hospital |
| Yarmouth..... | Yarmouth Hospital |

NEW BRUNSWICK

| | |
|------------------|---|
| Bathurst..... | James H. Dunn Hospital |
| Campbellton..... | Hotel-Dieu |
| Chatham..... | Hotel-Dieu |
| Moncton..... | Moncton Hospital |
| River Glade..... | Jordan Memorial Sanatorium (Tuberculosis) |
| St. John..... | General Public Hospital |
| | St. John County Hospital (Tuberculosis) |
| St. Stephen..... | Chipman Memorial Hospital |
| Tracadie..... | Hotel Dieu |

PRINCE EDWARD ISLAND

| | |
|--------------------|-------------------------------|
| Charlottetown..... | Charlottetown Hospital |
| | Prince Edward Island Hospital |
| Summerside..... | Prince County Hospital |

QUEBEC

| | |
|-------------------|---------------------------------------|
| Chicoutimi..... | Hotel-Dieu |
| Lake Edward..... | Lake Edward Sanatorium (Tuberculosis) |
| Levis..... | Hotel-Dieu |
| Montreal..... | Montreal General |
| | Notre Dame |
| | Hotel-Dieu |
| | Royal Victoria |
| | St. Paul's (Contagious diseases) |
| | Alexandra (Contagious diseases) |
| | Grace Dart Home (Tuberculosis) |
| | Convalescent Home |
| Quebec..... | Hotel-Dieu |
| | Jeffery Hale's |
| | Civic Hospital (Contagious diseases) |
| | Laval Hospital (Tuberculosis) |
| Sorel..... | Hopital General |
| St. Jean..... | Hopital St. Jean |
| Three Rivers..... | Hopital St. Joseph |

BRITISH COLUMBIA

| | |
|----------------------|----------------------------|
| Anyox..... | Anyox General Hospital |
| Chemainus..... | General Hospital |
| Cumberland..... | General Hospital |
| Duncan..... | King's Daughters' Hospital |
| Ladysmith..... | General Hospital |
| Nanaimo..... | General Hospital |
| New Westminster..... | St. Mary's Hospital |
| Ocean Falls..... | Ocean Falls Hospital |

BRITISH COLUMBIA—*Concluded*

| | |
|--------------------|---|
| Port Alberni..... | West Coast General Hospital |
| Powell River..... | St. Luke's Hospital |
| Prince Rupert..... | General Hospital |
| Tranquille..... | Tranquille Sanatorium (Tuberculosis) |
| Vancouver..... | St. Paul's Hospital |
| Victoria..... | St. Joseph's Hospital |
| | Royal Jubilee Hospital |
| | City Isolation Hospital (Contagious diseases) |

Emergency hospitals were operated at the following ports:—

Nova Scotia:—Arichat, Canso, Digby, Liverpool, Lockport, Louisburg, Shelburne.
Prince Edward Island:—Souris.
Quebec:—Port Alfred.

Fortunately there has been no outbreak of major or minor contagious diseases during the year, but there has been a large increase in the shipping activities on both the Atlantic and Pacific coasts, as instanced by the increase in the collection of sick mariners' dues, which is \$6,383.85 over the previous year. As a consequence the number of sick and injured has increased proportionately.

The total number of sick and distressed mariners treated during the year 1925-26 was 3,782, as compared with 3,649 for the year 1924-25. This, however, does not represent the actual number of sick mariners attended to during the year. As such increase was not anticipated, no provision was made in the estimates, and, as a consequence, the amount of \$140,000 voted by Parliament was insufficient to cover the entire expenditure. Accounts totalling in the neighbourhood of \$32,000 had to be transferred and paid out of the Vote for the year 1926-27. Application has been made for an increase in the estimates to cover this amount.

Concerning the number of days of hospital treatment, the total was 36,292, as compared with 36,185 in the previous year. The same remarks pertain. This does not represent the total number of days since a large percentage of bills had to be transferred to the year 1926-27, as here above explained.

Detailed information as concerns the expenditure will be found in the financial statement.

A tabular statement of diseases and injuries treated during the year 1925-26 is appended.

STATEMENT OF DISEASES AND INJURIES TREATED DURING THE YEAR 1925-26

| | |
|-------------------------------|-----|
| <i>General Diseases</i> | 693 |
| Measles..... | 4 |
| Diphtheria..... | 3 |
| Chicken-pox..... | 5 |
| Mumps..... | 8 |
| Scarlatina..... | 4 |
| Erysipelas..... | 4 |
| Typhoid fever..... | 22 |
| Para-typhoid..... | 1 |
| Tuberculosis..... | 39 |
| Malaria..... | 20 |
| Scabies..... | 12 |
| Toemia..... | 1 |
| Syphilis..... | 122 |
| Gonorrhoea..... | 141 |
| Alcoholism..... | 5 |
| Diabetes..... | 4 |
| Beri-Beri..... | 3 |
| Rheumatism..... | 81 |
| Scurvy..... | 1 |
| Anaemia..... | 8 |
| New growths—malignant..... | 3 |
| “ “ —non-malignant..... | 17 |
| Cyst..... | 14 |
| General debility..... | 8 |
| Neurasthenia..... | 18 |
| Ptomaine..... | 6 |
| Hemophilia..... | 3 |
| Influenza..... | 135 |
| Toxemia..... | 1 |

STATEMENT OF DISEASES AND INJURIES, ETC. *Continued*

| | | | |
|---|-----|----|-------|
| <i>Local Diseases</i> | | | 2,062 |
| Diseases of the Nervous System..... | | 19 | |
| 1. Of the nerves..... | | 19 | |
| Neuritis..... | 19 | | |
| 2. Of the Spinal Cord and Membranes..... | | 2 | |
| Degeneration of lateral column..... | 2 | | |
| 3. Of brain and membranes..... | | 1 | |
| Meningitis..... | 1 | | |
| 4. Functional and other nervous diseases, etc.... | | 77 | |
| Apoplexy..... | 1 | | |
| Paralysis..... | 5 | | |
| Hemiplegia..... | 1 | | |
| Epilepsy..... | 8 | | |
| Neuralgia..... | 27 | | |
| Hemorrhage..... | 2 | | |
| Headache..... | 5 | | |
| Hysteria..... | 3 | | |
| Myalgia..... | 18 | | |
| Dementia praecox..... | 3 | | |
| Insomnia..... | 2 | | |
| Meningo-encephalitis..... | 1 | | |
| Psychosis..... | 3 | | |
| Diseases of the eye..... | | | 57 |
| Conjunctivitis..... | 25 | | |
| Ulcer cornea..... | 8 | | |
| Iritis..... | 11 | | |
| Pan-ophthalmitis..... | 4 | | |
| Trachoma..... | 2 | | |
| Keratitis..... | 2 | | |
| Blepharitis..... | 1 | | |
| Ptergion..... | 1 | | |
| Cataract..... | 3 | | |
| Diseases of the ear..... | | | 74 |
| Cerumen..... | 20 | | |
| Otitis media..... | 34 | | |
| Mastoiditis..... | 6 | | |
| Deafness..... | 6 | | |
| Otitis..... | 8 | | |
| Diseases of the nose..... | | | 31 |
| Rhinitis..... | 13 | | |
| Abscess..... | 1 | | |
| Epistaxis..... | 3 | | |
| Coryza..... | 11 | | |
| Ethmoiditis..... | 3 | | |
| Diseases of the Circulatory System..... | | | 46 |
| Heart disease (Valvular)..... | 13 | | |
| Tachycardia..... | 3 | | |
| Arterio-sclerosis..... | 2 | | |
| Thrombosis..... | 1 | | |
| Varicose veins..... | 9 | | |
| Endocarditis..... | 3 | | |
| Oedema..... | 3 | | |
| Myocarditis..... | 6 | | |
| Angina-pectoris..... | 4 | | |
| Cardialgia..... | 2 | | |
| Diseases of the Respiratory System..... | | | 320 |
| Bronchitis..... | 143 | | |
| Tonsillitis..... | 68 | | |
| Pneumonia..... | 26 | | |
| Broncho-pneumonia..... | 1 | | |
| Laryngitis..... | 14 | | |
| Congestion lungs..... | 14 | | |
| Pleurisy..... | 28 | | |
| Asthma..... | 15 | | |
| Oedema lungs..... | 2 | | |
| Hemorrhage lungs..... | 4 | | |
| Abscess lungs..... | 5 | | |
| Diseases of the Digestive System..... | | | 639 |
| Dental caries..... | 63 | | |
| Toothache..... | 56 | | |
| Cancerum oris..... | 1 | | |
| Alveolar abscess..... | 4 | | |
| Quinsy..... | 4 | | |
| Pharyngitis..... | 15 | | |
| Ulcerated stomach..... | 18 | | |
| Gastritis..... | 76 | | |
| Indigestion..... | 78 | | |
| Pyorrhoea..... | 3 | | |
| Cancer stomach..... | 1 | | |

STATEMENT OF DISEASES AND INJURIES, ETC.—*Continued*Diseases of the Digestive System—*Concluded*

| | |
|-----------------------------|----|
| Fistula..... | 6 |
| Hemorrhoids..... | 22 |
| Appendicitis..... | 85 |
| Colitis..... | 20 |
| Jaundice..... | 14 |
| Diarrhoea..... | 7 |
| Constipation..... | 20 |
| Hepatitis..... | 1 |
| Hernia..... | 65 |
| Dysentery..... | 9 |
| Enteritis..... | 10 |
| Dyspepsia..... | 19 |
| Hepatic colic..... | 3 |
| Gastro-enteritis..... | 16 |
| Intestinal obstruction..... | 6 |
| Cholecystitis..... | 3 |
| Ulcer duodenum..... | 10 |
| Peritonitis..... | 2 |
| Abdominal adhesions..... | 5 |

Diseases of the Lymphatic System..... 24

| | |
|---------------|----|
| Adenitis..... | 24 |
|---------------|----|

Diseases of the Urinary System..... 78

| | |
|-----------------------------|----|
| Nephritis..... | 19 |
| Bright's disease..... | 2 |
| Renal colic..... | 7 |
| Peri-nephritic abscess..... | 4 |
| Cystitis..... | 16 |
| Phosphaturia..... | 3 |
| Prostatitis..... | 8 |
| Retention..... | 2 |
| Renal calculus..... | 7 |
| Diuresis..... | 3 |
| Uræmia..... | 4 |
| Hematuria..... | 2 |
| Pyelitis..... | 1 |

Diseases of the Generative System..... 125

| | |
|-------------------|----|
| Urethritis..... | 37 |
| Balanitis..... | 2 |
| Stricture..... | 11 |
| Paraphimosis..... | 6 |
| Chancroids..... | 21 |
| Varicocele..... | 7 |
| Hydrocele..... | 5 |
| Orchitis..... | 23 |
| Phimosis..... | 1 |
| Epididymitis..... | 12 |

Diseases of the Organs of Locomotion..... 146

| | |
|---------------------|----|
| Osteitis..... | 2 |
| Sciatica..... | 13 |
| Lumbago..... | 43 |
| Osteo-myelitis..... | 5 |
| Bursitis..... | 13 |
| Sinusitis..... | 4 |
| Periosteitis..... | 5 |
| Synovitis..... | 17 |
| Arthritis..... | 37 |
| Neurosis..... | 1 |
| Myositis..... | 6 |

Diseases of the Connective Tissues..... 229

| | |
|-----------------|-----|
| Cellulitis..... | 154 |
| Abscess..... | 75 |

Diseases of the Skin..... 194

| | |
|--------------------|----|
| Carbuncle..... | 11 |
| Boils..... | 69 |
| Erythema..... | 3 |
| Eczema..... | 23 |
| Herpes Zoster..... | 8 |
| Urticaria..... | 1 |
| Dermatitis..... | 14 |
| Ulcers..... | 30 |
| Whitlow..... | 11 |
| Impetigo..... | 2 |
| Psoriasis..... | 10 |
| Seborrhoea..... | 1 |
| Acne..... | 2 |
| Anthrax..... | 2 |
| Tinea..... | 1 |
| Sycosis..... | 3 |
| Alopecia..... | 2 |
| Ringworm..... | 1 |

STATEMENT OF DISEASES AND INJURIES, ETC.—*Concluded*

| | | |
|----------------------------|----|-------|
| <i>Injuries</i> | | 1,027 |
| General Injuries..... | | 81 |
| Multiple injuries..... | 26 | |
| Burns and scalds..... | 55 | |
| Local Injuries..... | | 946 |
| Injured face..... | 27 | |
| Contusions..... | 67 | |
| Injured eyes..... | 19 | |
| Injured head..... | 26 | |
| Injured throat..... | 2 | |
| Injured wrist..... | 5 | |
| Injured chest..... | 16 | |
| Injured scalp..... | 7 | |
| Injured fingers..... | 96 | |
| Injured arm..... | 20 | |
| Flat foot..... | 5 | |
| Injured abdomen..... | 2 | |
| Injured back..... | 20 | |
| Injured side..... | 15 | |
| Injured lip..... | 2 | |
| Injured leg..... | 31 | |
| Injured spine..... | 1 | |
| Injured knee..... | 22 | |
| Injured shoulder..... | 23 | |
| Injured toes..... | 8 | |
| Injured foot..... | 41 | |
| Injured hand..... | 79 | |
| Injured thigh..... | 15 | |
| Injured ribs..... | 6 | |
| Injured ankle..... | 11 | |
| Injured elbow..... | 6 | |
| Fractured skull..... | 15 | |
| Fractured ribs..... | 39 | |
| Fracture leg..... | 14 | |
| Fracture clavicle..... | 3 | |
| Fracture femur..... | 7 | |
| Fracture tibia-fibula..... | 10 | |
| Fracture tibia..... | 6 | |
| Fracture fibula..... | 8 | |
| Fracture spine..... | 5 | |
| Fracture ulna..... | 8 | |
| Fracture foot..... | 12 | |
| Fracture os calcis..... | 5 | |
| Fracture patella..... | 2 | |
| Fracture elbow..... | 3 | |
| Fracture maxillary..... | 3 | |
| Fracture finger..... | 8 | |
| Fracture radius..... | 6 | |
| Fracture metacarpal..... | 7 | |
| Fracture scapula..... | 2 | |
| Dislocated hand..... | 1 | |
| Dislocated shoulder..... | 5 | |
| Dislocated femur..... | 1 | |
| Sprained hand..... | 2 | |
| Sprained hip..... | 3 | |
| Sprained back..... | 5 | |
| Sprained knee..... | 7 | |
| Sprained ankle..... | 16 | |
| Sprained shoulder..... | 4 | |
| Sprained arm..... | 3 | |
| Sprained wrist..... | 10 | |
| Sprained foot..... | 1 | |
| Strained foot..... | 6 | |
| Strained abdomen..... | 5 | |
| Dressings..... | 2 | |
| Fatigue..... | 1 | |
| Gun-shot wounds..... | 2 | |
| Foreign body finger..... | 5 | |
| Foreign body arm..... | 2 | |
| Foreign body eye..... | 3 | |
| Foreign body ears..... | 2 | |
| X-ray examination..... | 21 | |
| Malingering..... | 2 | |
| No diagnosis..... | 27 | |
| Observation..... | 14 | |
| Examination..... | 27 | |
| General Diseases..... | | 693 |
| Local Diseases..... | | 2,062 |
| General Injuries..... | | 81 |
| Local Injuries..... | | 946 |
| Total..... | | 3,782 |

VENEREAL DISEASE CONTROL

The sum of \$125,000 was granted by the Dominion Government for the work of venereal disease control during the fiscal year 1925-26. This grant was \$25,000 less than that of the previous year. The reduction was made as it was felt that the provinces now required less financial assistance than in former years to conduct their clinics and laboratories and carry out their educational work. The grant was allocated as follows:—

| | |
|---|---------------|
| Alberta..... | \$ 7,711 18 |
| Ontario..... | 38,443 12 |
| Nova Scotia..... | 6,864 43 |
| Saskatchewan..... | 9,926 52 |
| Manitoba..... | 7,705 58 |
| New Brunswick..... | 5,082 78 |
| British Columbia..... | 6,874 20 |
| Quebec..... | 30,941 48 |
| National Council for Combating Venereal Diseases..... | 5,000 00 |
| Printing and stationery..... | 970 02 |
| Total..... | \$ 119,519 31 |

During the year there were in operation in the various provinces fifty-six clinics for the free treatment of venereal diseases, together with laboratory facilities for diagnosis. There are, in addition, subsidiary clinics in hospitals and institutions where treatment is given. Treatment is also provided for patients in outlying districts through local physicians. Prisoners in jails and penitentiaries are examined at time of entrance and treated.

The cases under treatment for the calendar year 1925 were approximately as follows:—

| | |
|------------------------------------|--------|
| Under treatment in clinics..... | 12,450 |
| Under treatment by physicians..... | 14,441 |
| Total..... | 26,891 |

The cost of each treatment including laboratory examination was twenty-seven cents.

There were 51,158 copies of pamphlets in English and 74,731 copies of pamphlets in French, making a total of 125,889 copies of literature distributed during the year. The departmental publication "Abstracts of Current Venereal Disease Literature" was enlarged during the year to include general public health literature and is now known as "Abstracts of Current Public Health Literature." Copies of this publication are forwarded to physicians, nurses and to all those who are interested in public health. Comparison with the previous year shows that there has been a diminution in the number of copies of literature distributed. This is due to a diminishing demand on the part of the public for literature of this type, and is an indication of a lessening in interest on the part of the public in the subject. This is evidenced also in the field of public lectures. The demand for lectures on the subject of the venereal diseases is now almost negligible. The interest which was awakened following the war has subsided and the public is to-day apathetic if not inimical to venereal disease propaganda of an intensive type.

The clinic has proved its worth and is of extreme value in diminishing the late manifestations of syphilis, such as paresis, locomotor ataxia and involvement of the heart and blood vessels; thus diminishing the number of cases which would eventually find their way into asylums and hospitals as a public charge. The continued maintenance of the free clinic is essential.

Physicians are still apathetic as regards reporting their cases of venereal diseases, so that it is impossible to make any adequate estimate of the number of new infections each year. Under the circumstances it has been thought best not to attempt to draw any conclusions from statistics at hand as such conclusions, in view of the inadequacy of this premise, would of necessity prove misleading.

The campaign which now revolves to so large an extent about the clinic has, everything considered, been carried out successfully during the year. This department has given the usual co-operation through lectures, distribution of literature, collection of venereal disease data and statistics.

NARCOTIC DIVISION

During the fiscal year ended March 31, 1926, there has been a very marked improvement in the narcotic drug situation, over conditions existing during the previous year. This can be attributed to a continued aggressive policy adopted by the various police organizations throughout the Dominion, and also to the improvement brought about as a result of the International agreement reached at Geneva at the second Opium Conference in the spring of 1925, whereby all chemical manufacturers in Europe are licensed, and the export of all narcotics, such as morphine, heroin, cocaine, etc., restricted under export licenses granted conditional on written authority being first obtained by the exporter from their customers in Canada, for allowing such shipments to be sent forward.

One of the pressing needs in Canada is provincial legislation for the compulsory treatment of all existing drug habitues, and proper institutions or hospitals for the treatment of such cases. It is difficult to stamp out this traffic so long as there are large numbers of drug addicts at large in the various towns and cities throughout the country, because so long as the demand exists, the supply will be forthcoming. To date, three of the provinces, namely, Alberta, Manitoba, and Nova Scotia, have passed Provincial laws to provide for the compulsory treatment of drug addicts, but only in the case of Alberta has the law really been put into effect, and proper institutions provided for the treatment of such cases. Manitoba and Nova Scotia have simply passed the necessary legislation, without adopting the required regulations, or putting the law into effect. The matter of providing for the treatment of such cases is, of course, one altogether for the provincial authorities to deal with, the same as they care for their insane, feeble minded, tubercular cases, and V.D. patients, etc.

The volume of narcotics being smuggled into the country through the underground channels has been materially reduced as a result of international co-operation and a marked improvement has been the result. There is, however, still considerable supplies of smoking opium smuggled into the country, particularly through the Ports of Union Bay, Nanaimo, and Victoria, B.C., on the island of Vancouver, and at the port of Vancouver, B.C. There is also considerable amounts of morphine and cocaine smuggled into the country through the ports on the Pacific coast from the Orient. The bulk of the illicit supply, however, such as morphine, heroin and cocaine is smuggled into the Dominion through the Ports of St. John, N.B., and Halifax, N.S., in the winter season, and Montreal and Quebec, P.Q., during the summer. Illicit shipments of narcotics also reach the Dominion from time to time through United States Ports; such shipments generally being billed as general merchandise or ordinary articles of commerce, falsely packed and labelled, etc.

TABLE 2.—Total Number of Licenses issued during the Fiscal Year ended March 31, 1926

| | |
|--------------------------|-----|
| Import licenses..... | 298 |
| Export licenses..... | 43 |
| Wholesale druggists..... | 108 |
| Retail druggists..... | 30 |

TABLE 3.—Amount of Narcotics imported into Canada under the licensing system which became effective during the year 1919, for the fiscal years ended March 31, 1919-1926 inclusive

| | Cocaine | Morphine | Crude Opium |
|-----------|---------|----------|-------------|
| | Ozs. | Ozs. | Pounds |
| 1919..... | 12,333 | 30,087 | 34,262 |
| 1920..... | 6,968 | 28,198 | 13,626 |
| 1921..... | 3,310 | 12,124 | 2,953 |
| 1922..... | 2,952 | 8,774 | 1,700 |
| 1923..... | 3,330 | 10,998 | 1,373 |
| 1924..... | 1,561 | 7,092 | 845 |
| 1925..... | 1,589 | 7,424 | 655 |
| 1926..... | 2,633 | 8,651 | 810 |

NOTE:—Morphine includes Diacetylmorphine (Heroin).

In addition to the amount of narcotics imported during the twelve months ended March 31, 1926, the following amounts of such drugs seized for infractions of the Customs Act and the Opium and Narcotic Drug Act were disposed of by the Department of Health, and the Department of Customs and Excise, to licensed dealers:—

TABLE 4

| Drug | By Department of Customs and Excise | By Department of Health | Total |
|---------------------------------|-------------------------------------|-------------------------|------------------|
| Cocaine..... | | 48 ozs. 360 gr. | 48 ozs. 360 grs. |
| Heroin (Diacetyl-morphine)..... | 116 ozs. | | 116 ozs. |
| Gum Opium..... | 252 lbs. 7 ozs. | | 252 lbs. 7 ozs. |

TABLE 5.—Summary of Narcotics Exported from Canada during the Fiscal Year ended March 31, 1926

| Kind of Drug | Destination | Quantity |
|---------------------|--------------------------|-----------------|
| Cocaine..... | Newfoundland..... | 1 oz. 257 grs. |
| "..... | British West Indies..... | 16 ozs. |
| Morphine..... | Newfoundland..... | 5 ozs. 459 grs. |
| "..... | British West Indies..... | 8 ozs. |
| Heroin..... | Newfoundland..... | 2 ozs. 31 grs. |
| Powdered opium..... | Newfoundland..... | 6 ozs. 445 grs. |

PREPARATIONS CONTAINING NARCOTIC DRUGS

| | |
|--|---|
| Tincture of opium (Newfoundland)..... | 48 ozs. containing 218 grs. Anhydrous Morphine |
| Asparoline (Newfoundland)..... | 72 ozs. containing 120 grs. Cannabis Indica |
| Chlorodyne (Newfoundland)..... | 24 ozs. |
| Elixir Terpin Hydrate and Diacetylmorphine (Newfoundland)..... | 1,646 ozs. containing 265½ grs. Heroin |
| Hypno Bromie Compound (Newfoundland)..... | 640 ozs. containing 96 grs. Morph. and 384 grs. Can. Ind. |
| Tincture of Camphour Compound (Newfoundland)..... | 160 ozs. containing 32 grs. Morphine |
| Syrup of White Pine (Newfoundland)..... | 80 ozs. containing 13½ grs. Heroin |
| Ointment Galls and Opium (Newfoundland)..... | 16 ozs. containing 720 grs. Opium |
| Ichthy-Tannic Suppositories (No. 1291) (Newfoundland)..... | 1,291 grs. Opium |
| Dovers Powders (Newfoundland)..... | 3,300 tabs. containing 1,210 grs. Opium |
| Syrup Cocillana Compound (Buenos Aires, S.A.)..... | 24,000 ozs. containing 2,400 grs. Heroin |

TABLE 6.—Number of Aliens Deported from Canada, having been convicted of offences under the Opium and Narcotic Drug Act, as from June 28, 1922, (the date on which the amendment came into force) to January 1, 1926

| | |
|-----------------------------|-----|
| Chinese..... | 281 |
| United States Citizens..... | 71 |
| French..... | 3 |
| English..... | 2 |
| Greek..... | 2 |
| Italian..... | 5 |
| Irish..... | 1 |
| Philippino..... | 1 |
| Japanese..... | 1 |
| Czecho-Slovak..... | 1 |
| Total..... | 368 |

TABLE 7.—Amount of Narcotics seized by the Department of Customs and Excise during the calendar year ended December 31, 1925

| Place | Date | Nationality | Goods |
|----------------|----------------|---------------|--|
| Vancouver..... | Jan. 5, 1925 | Unknown..... | 50 jars opium 1 tin opium 7 ozs. gum opium |
| Montreal..... | Jan. 13, 1925 | Unknown..... | 96 lbs. gum opium |
| Montreal..... | Jan. 13, 1925 | Unknown..... | 104 lbs. gum opium |
| Montreal..... | July 23, 1925 | Unknown..... | 23 bricks gum opium |
| Vancouver..... | Jan. 29, 1925 | Chinaman..... | 100 tins opium |
| Vancouver..... | Feb. 10, 1925 | Chinaman..... | 50 tins opium |
| Vancouver..... | Feb. 23, 1925 | Unknown..... | 44 jars opium 3 tins opium 1½ lbs. gum opium |
| Vancouver..... | Mar. 10, 1925 | Chinaman..... | 50 tins opium |
| Vancouver..... | Mar. 26, 1925 | Chinaman..... | 18 tins opium |
| Vancouver..... | April 19, 1925 | Unknown..... | 300 tins opium |
| Vancouver..... | April 22, 1925 | Unknown..... | 96 tins opium |
| Vancouver..... | April 29, 1925 | Unknown..... | 405 tins opium |
| Vancouver..... | May 18, 1925 | Chinaman..... | 11 tins opium |
| Vancouver..... | June 4, 1925 | Unknown..... | 728 tins opium 15 lbs. gum opium 10 ozs. morphine |
| Victoria..... | June 15, 1925 | Chinaman..... | 60 tins opium |
| Vancouver..... | July 11, 1925 | Unknown..... | 140 tins opium |
| Vancouver..... | July 14, 1925 | Unknown..... | 113 tins opium |
| Vancouver..... | June 25, 1925 | Chinaman..... | 2 tins opium |
| Union Bay..... | Oct. 30, 1925 | Chinaman..... | 252 tins opium |
| Vancouver..... | Nov. 10, 1925 | Unknown..... | 33½ ozs. morphine |
| Vancouver..... | Dec. 4, 1925 | Unknown..... | 1 tin opium 1½ lbs. opium 71 jars opium 18 ozs. gum opium |
| Vancouver..... | Dec. 9, 1925 | Unknown..... | 270 tins opium |

TABLE 8.—Summary of Narcotic Drugs Seized by Provincial and Municipal Police, during the fiscal year ended March 31, 1926

| | | | |
|---|---------|---------|----------|
| <i>Opium—</i> | | | |
| Opium (smoking)..... | | 1 oz. | 63 grs. |
| 98 tins of opium containing (Approx.)..... | 16 lbs. | 2 ozs. | |
| *Decks of opium..... | 95 | | |
| “ Yenshe (seconds)..... | 23 | | |
| Pills of opium..... | 35 | | |
| <i>Morphine—</i> | | | |
| Morphine..... | | 27 ozs. | 152 grs. |
| *Decks of morphine..... | 47 | | |
| Tablets of morphine..... | 50 | | |
| <i>Cocaine—</i> | | | |
| Cocaine..... | | 1 oz. | 360 grs. |
| *Decks of cocaine..... | 159 | | |
| <i>Heroin (Diacetylmorphine)—</i> | | | |
| *Decks of heroin..... | 15 | | |
| *Deck is a small package containing 3 to 5 grs. | | | |
| <i>Paraphernalia—</i> | | | |
| Opium lamps..... | 7 | | |
| Opium smoking pipes..... | 4 | | |
| Opium pipe bowls..... | 7 | | |
| Opium scales (Chinese)..... | 3 | | |
| Scrapers (pipe)..... | 4 | | |

TABLE 9.—Summary of Narcotic Drugs and Opium Smoking Paraphernalia seized by the Royal Canadian Mounted Police during the fiscal year ended March 31, 1926

| | | | |
|--|---------|---------|----------|
| <i>Opium—</i> | | | |
| Opium, smoking..... | 16 lbs. | 4 ozs. | 283 grs. |
| 15 tins containing (approximately)..... | 8 lbs. | 4 ozs. | |
| Opium seconds (Yenshe)..... | 7 lbs. | 12 ozs. | 458 grs. |
| *Decks of opium..... | 715 | | |
| " Yenshe..... | 55 | | |
| <i>Morphine—</i> | | | |
| Morphine..... | | 14 ozs. | 36 grs. |
| *Decks of morphine..... | 4 | | |
| Tablets of morphine..... | 678 | | |
| <i>Cocaine—</i> | | | |
| Cocaine..... | | 17 ozs. | 325 grs. |
| *Decks of cocaine..... | 60 | | |
| Tablets of cocaine..... | 152 | | |
| <i>Heroin (Diacetylmorphine)—</i> | | | |
| Heroin..... | | 35 ozs. | 382 grs. |
| *Decks of heroin..... | 11 | | |
| Tablets of heroin..... | 27 | | |
| <i>Alleged Drugs (Miscellaneous) Including Morphine, Heroin and Cocaine—</i> | | | |
| Thirty-six bottles containing..... | | 47 ozs. | 382 grs. |
| *Decks of drugs..... | 210 | | |
| *Deck is a small package containing 3 to 5 grs. | | | |
| <i>Paraphernalia—</i> | | | |
| Opium lamps..... | 161 | | |
| Opium smoking pipes..... | 192 | | |
| Opium pipe bowls..... | 31 | | |
| Opium scales (Chinese)..... | 30 | | |
| Scrapers (pipe)..... | 78 | | |

PROPRIETARY OR PATENT MEDICINES

During the fiscal year ended March 31, 1926, 682 medicinal preparations were presented for registration under The Proprietary or Patent Medicine Act and, of this number, 79 were rejected as non-registerable for the following reasons:—

- 24 were condemned by the Advisory Board as being insufficiently medicated to prevent their use as alcoholic beverages;
- 22 as not coming within the legal definition of a medicine subject to this Act;
- 11 on account of the manufacturers having failed to furnish required details of composition and proposed recommendations;
- 7 as medicines for physicians' use only;
- 4 as designed for illegal purposes;
- 2 as products which should be administered only under skilled supervision;
- 2 as containing opium;
- 2 as absolute frauds;
- 1 as a beverage;
- 1 as insanitary.

The labels, wrappers and literature used on preparations registered by 488 manufacturers were examined, with the result that these manufacturers were obliged to make 334 modifications.

One hundred and four newspaper advertisements were made the subject of special investigation and 52 were condemned.

Of 21 medicines reported for examination to the Dominion Chief Analyst, 9 were found satisfactory.

Thirty-five seizures were made involving 18,727 packages of medicines.

A further extension of one year was granted by Order in Council to enable manufacturers and dealers to dispose of old stocks on hand of proprietary or patent medicines for internal use bearing old registration numbers issued under the Act of 1908, and external proprietary or patent medicines which bear an external medicine stamp marked "Prior to Proprietary or Patent Medicine Act, 1919."

A marked improvement was noticed in the newspaper advertisements and circulars used for registered medicines.

The misuse of registration numbers to facilitate the sale of alcoholic beverages under the guise of medicines has about ceased, doubtless due to the prompt action of the department in seizing illegal medicines and prosecuting the manufacturers. It might be mentioned, by way of example, that the last manufacturer who registered a preparation as a legitimate medicine and shipped the actual product into the North country available as an alcoholic beverage was forced to recall every package of his goods and pay costs amounting to almost \$200, as expenses incurred by two officers in investigating a large territory.

The administrators of the alcoholic liquor laws in the various provinces were co-operated with where the sale of proprietary medicines as beverages was involved. At present the medicated wine situation may be said to be very satisfactory throughout Canada.

The practice of this division in refusing to accept for registration cancer remedies is almost daily being vindicated, inasmuch as medical societies and men engaged in scientific research on cancer are constantly condemning the use of any medicine for the treatment of cancer which is not given under skilled supervision.

DIVISION OF CHILD WELFARE

As in previous years, co-operation has been maintained with other departments of the Dominion Government, with provincial authorities concerned in child welfare work, and with an increasing number of individuals and of voluntary societies in Canada and in Great Britain. Correspondence has been received from public health authorities and others in England and Wales, Scotland, Newfoundland, Australia, New Zealand, South Africa, West Africa, India, the Federated Malay States and other parts of the British Empire, as well as from the United States, Germany, and Russia, and our publications have been sent to these countries, on request. Some of "The Little Blue Books" have been reprinted in part by the Country Women's Associations of Australia, and a few of the Bush Centres in Australia are using "The Little Blue Books."

MATERNAL MORTALITY INQUIRY

Following the publication of the Report of the First Conference on Medical Services in Canada on or about April 15, 1925, and after sixty or more conferences with those specially interested had taken place, the necessary cards, letters and other forms were drafted and submitted a second time to the Dominion Council of Health for approval. These were then printed and despatched to the provincial registrars of births, marriages and deaths, who had also been consulted as to this inquiry, and the mortality returns have since been received monthly or oftener from each province, with the assistance of the provincial registrars and the Dominion Bureau of Statistics. The year for which the inquiry is being carried on extends from July 1, 1925, to June 30, 1926. On the whole, the forms sent to physicians, clergymen and others who have signed the certificate of registration of death have been promptly returned and valuable information has been received. A preliminary report of the inquiry has been presented to the Dominion Council of Health and it is

intended as soon as the returns are complete, probably about September 1, to proceed with the final report.

Two other matters connected with this inquiry are the Hospital Map of Canada and the Home Service Nursing Corps.

HOSPITAL MAP OF CANADA

The provincial authorities have, on request furnished a list of the name and location of each hospital in the province, together with the total number of beds in 1925, the number of beds available for maternity cases, and the total number of births in each hospital in 1924. These have been compiled and arranged and from the information so obtained, a Hospital Map of Canada has been prepared by the Natural Resources Intelligence Service, which it is hoped will be published at an early date together with the list and statistics.

HELP FOR THE MOTHER IN THE HOME

Since the maternal mortality inquiry was begun it has become increasingly evident that help should be provided in some way for the over-burdened mother in the home and efforts to this end have been continued during the present year, with some success. The outline for the organization of a Home Service Nursing Corps which was prepared by request has met with some favour.

YOUNG PERSONS IN PENITENTIARIES

Increased interest has been shown in this matter during the year. The Honourable Minister of Justice said in the House of Commons on March 31, 1926:—

"There is another thing to which I am giving a good deal of thought and that is the possibility of segregating the young convicts who are sentenced for the first time. Under present conditions they are mixed up with the hardened criminals, and that does not give them a chance. If we could find a way to build a special institution, or even two institutions for the purpose of receiving and keeping these young men, rather than put them with the hardened criminals, I think that would be a good reform to undertake".

IMMIGRANT CHILD WELFARE

The Memorandum on the Care of Children not in their own homes with special reference to children coming from overseas, as approved by the provincial superintendents for child welfare work, was released to Canadian newspapers, journals and magazines on December 19, 1925, and received wide publicity. So many requests have been received for copies of this Memorandum that it is intended to republish it at an early date, as soon as complete information can be obtained as to the superintendent or director of this work in each province, his staff, and the legislation which they are appointed to carry out, also the name of each association which emigrates children to Canada, with its British and Canadian headquarters and the name of the superintendent or director.

PUBLICATIONS

The demand for "The Little Blue Books" continues.

The number of copies distributed during the present year was 313,717, of which 160,849 were in English and 152,868 in French.

Included in the above are 72,346 copies of "The Canadian Mother's Book," of which 39,886 were in English and 32,460 in French.

The corresponding numbers for last year were 338,467 and 55,951.

Through the kindness of Commissioner Starnes of the Royal Canadian Mounted Police, forty-five copies of "The Canadian Mother's Book" and "Supplement" have been distributed down the Mackenzie river at Chipewyan, Fitzgerald, Smith, Resolution, Rae, Providence, Norman, Good Hope, and Aklavik.

THE LEAGUE OF NATIONS AND VOLUNTARY SOCIETIES

On January 9, 1926, an official intimation, dated December 11, 1925, was received from the League of Nations Advisory Commission for the Protection and Welfare of Children and Young People in regard to the appointment of assessors to represent voluntary societies in different countries on the Child Welfare Committee of the Advisory Commission for the Protection and Welfare of Children and Young People.

Two voluntary societies in Canada, the Canadian Council on Child Welfare and the Social Service Council of Canada were invited to collaborate in the submission of names of persons as assessors.

Miss Charlotte Whitton, M.A., and others were nominated and Miss Whitton was later appointed as one of the assessors. This recognition of voluntary associations engaged in child welfare work will give encouragement and satisfaction to the many voluntary societies in Canada who work for child welfare.

NUMBER OF LITTLE BLUE BOOKS (ENGLISH) DESPATCHED IN THE FISCAL YEAR ENDING MARCH 31, 1926

| | |
|-------------|---------|
| No. 2..... | 39,886 |
| No. 3..... | 10,473 |
| No. 4..... | 7,361 |
| No. 5..... | 11,388 |
| No. 6..... | 9,609 |
| No. 7..... | 7,789 |
| No. 8..... | 6,311 |
| No. 9..... | 7,792 |
| No. 10..... | 6,708 |
| No. 11..... | 7,857 |
| No. 12..... | 9,844 |
| No. 13..... | 9,199 |
| No. 14..... | 9,542 |
| No. 15..... | 9,068 |
| No. 16..... | 8,022 |
| Total..... | 160,849 |

NUMBER OF LITTLE BLUE BOOKS (FRENCH) DESPATCHED IN THE FISCAL YEAR ENDING MARCH 31, 1926

| | |
|-------------|---------|
| No. 2..... | 32,460 |
| No. 3..... | 13,834 |
| No. 4..... | 6,739 |
| No. 5..... | 8,892 |
| No. 6..... | 7,834 |
| No. 7..... | 7,524 |
| No. 8..... | 6,764 |
| No. 9..... | 7,089 |
| No. 10..... | 8,114 |
| No. 11..... | 8,615 |
| No. 12..... | 10,367 |
| No. 13..... | 8,024 |
| No. 14..... | 9,654 |
| No. 15..... | 11,355 |
| No. 16..... | 5,603 |
| Total..... | 152,868 |

FOOD AND DRUGS DIVISION

The year ended March 31, 1926, was one of advancement and progress in the analytical and inspectoral work of this division, which is charged with the administration of the Food and Drug Act, the Maple Products Act, and the Honey Act. In addition to these activities, laboratory services are performed in connection with the administration of the Opium and Narcotic Drugs Act, and the Patent or Proprietary Medicine Act. Numerous analyses were also made for other departments of Government, including Agriculture, Marine and Fisheries, Customs and Excise, National Defence, Indian Affairs, and Labour. This co-operation effects an economy in the public services.

Twenty-six inspectors of food and drugs were on duty, and laboratories operated at Ottawa, Halifax, Montreal, Winnipeg, and Vancouver. The analysts were handicapped to some extent by much-needed renovations and repairs to laboratory premises and equipment at Ottawa and Winnipeg. In spite of this, the interruptions were few and the number of samples analyzed shows a marked increase over those of previous years. The tables and comments which follow summarize briefly the outstanding features of the work.

FOOD AND DRUG LABORATORIES

| Nature of Samples | Laboratories | | | | |
|--|--------------|---------|----------|----------|-----------|
| | Ottawa | Halifax | Montreal | Winnipeg | Vancouver |
| From— | | | | | |
| Inspectors of Food and Drugs..... | 2,152 | 1,294 | 1,322 | 1,823 | 1,707 |
| Department of Agriculture..... | 91 | 10 | 437 | 18 | 321 |
| Royal Canadian Mounted Police (Narcotics)... | 192 | ..... | 238 | 3 | 73 |
| Other Departments of Government..... | 39 | 22 | ..... | 51 | 10 |
| Miscellaneous..... | 8 | ..... | 351 | 6 | 2 |
| | 2,482 | 1,326 | 2,348 | 1,901 | 2,113 |
| Grand total—10,170 | | | | | |
| Figures for previous year..... | 1,408 | 800 | 1,922 | 1,862 | 1,871 |
| Grand total—7,863 | | | | | |

*Foods**Apples* (Arsenical spray contamination)

On September 22, 1925, the Department of Health received information to the effect that authorities in England had taken action with respect to the sale of arsenic-contaminated apples said to have been imported from this continent. Immediate steps were taken to ascertain to what extent the apples of Nova Scotia were contaminated with arsenical residues of orchard sprays. This was necessary in the administration of the Food and Drugs Act because apples carrying large amounts of arsenic would be regarded as adulterated food since they would contain an added ingredient rendering them injurious to persons consuming them whether added with intent or otherwise. (Food and Drugs Act, 1920, section 3 f.)

The Senior Inspector of Food and Drugs in Halifax was instructed to collect samples of the different varieties of apples in warehouse and to submit them for analysis to the branch laboratories of this department located at Halifax. Twenty-five samples were collected from the Annapolis Valley and the analysis completed January 19, 1926.

It is noted that five of the samples showed absence of arsenic and in six others the amount was so small that it was impossible to estimate the quantity by significant figures. The largest amount was found on the Golden Russet.

apparently because the natural roughness of the skin in this variety interferes with the cleansing action of rain. Even the amount of arsenic found on these apples (0.3 parts As_2O_3 per million) is about one-sixteenth of the proportion said to have been complained of by the official inspection of Great Britain. Analyses made of different portions of the apple with a view to ascertaining to what extent the arsenic was accumulated or concentrated in and around the stems and blossom ends showed that the arsenic was fairly uniformly distributed on the exterior portions of the fruit and that the inner pulp or fleshy part of the apple was practically free of arsenic.

Inasmuch as the amounts of arsenic found are very small and would be in greater part removed by the ordinary process of washing and peeling, the use of these apples as food is not regarded as dangerous to health.

Baking Powder

Out of the sixty-four samples examined, all met the requirements of the standards with respect to arsenic and heavy metals. A few were misbranded either because they were short weight or because the packages did not bear any statement of net contents. In general the standard of 10 per cent as a minimum for available carbon dioxide, is well observed by the makers, although there is some complaint from deterioration in storage. It is rather surprising to find that one retailer had on his shelves baking powder packages which left the factory at least seventeen years ago. The sale of old, deteriorated stock is an imposition on the purchasing public and the inspectors are therefore obliged to order that such articles be destroyed.

Bread

Seven samples were examined for the Department of Labour to co-operate with them in a study of the composition of bread in relation to price. A so-called "bread improver" was found to consist of flour mixed with phosphate. Inspection of advertisements from the standpoint of the Food and Drugs Act led to the conclusion that the claim made that certain brands contain large amounts of butter, were exaggerated for the reason that the amount of fat actually present was very small, in fact almost negligible.

Butter

The Inspectors of Food and Drugs and the inspectors appointed under the Dairy Industries Act submitted in all 570 samples for analysis. Boron preservatives without declaration as required by the regulations were found in some shipments of butter imported from Australia. These were held until properly labelled. It is gratifying to learn that the adulteration with cocoanut oil so prevalent last year in the Montreal district, has been checked.

Candies

Seventy-eight samples were examined, chiefly for the presence of prohibited dyes and paraffin wax. Some of the cheaper candies were found to contain dyes which were not permitted by the regulations as amended 1924. This was due in part to lack of information on the part of the makers, but now that there is a better understanding regarding the standards, it is believed that the use of such colours has been abandoned as a general practice. There was one prosecution arising from the sale of caramels containing paraffin, but subsequent collections of caramels were found to be free of adulterants. This is due undoubtedly to the pressure brought to bear in this and previous years.

Canned Vegetables, Tomatoes, Catsup, etc.

Of the seventy-one samples examined, several were found to be misbranded. One brand of *canned tomatoes* labelled as "Fancy" would be more correctly

described as "Standard." One large stock of *canned corn on the cob* contained a great many "flat sours," characterized by absence of any pressure arising from gas production but with turbidity and objectionable taste and odor of the liquid. This was withdrawn from sale. A shipment of *canned pineapple* was found to consist of macerated pineapple cores, and was held until properly labelled. Undeclared colouring matter was found in one brand of *tomato catsup*. One shipment of *tomato paste* was refused entry into Canada.

Cheese

One hundred and seventy-five samples were examined, mainly for fat content and preservatives. In one instance there was a complaint that the cheese had caused illness in a number of persons, but a chemical analysis supplemented by thorough bacteriological examination did not reveal the presence of any substance injurious to health. Evidently the condition complained of was not caused by the cheese, but arose from some other source. One sample of cream cheese was found to contain borax. Several samples of specially reprocessed Cheddar cheese sold under such names as Kraft cheese, Loaf cheese, etc., were found to be of satisfactory quality.

Celery

Sixty imported shipments of celery were sampled for analysis with a view to ascertaining to what extent there was contamination from residual copper and arsenic spray used by the growers. In the previous year several carloads were held in Customs until washed thoroughly to remove visible contamination. Apparently the shippers have paid better attention to this matter as this year it was not necessary to detain or refuse entry to any shipments.

Cereals, Barley, Pot Barley, Graham Flour, Pancake Flour.

No adulteration was detected in fifty-three samples examined. A complaint was received to the effect that tale was used in facing the barley sold under the names "pot barley" and "pearl barley." Investigation showed that the exterior layers of the polished grain consisted entirely of barley starch and no tale was present. Ten samples of Graham flour were found to have the composition corresponding to the entire grain and evidently could be described as whole wheat products. The so-called "pancake flours" were found to be properly labelled.

Coffee

Of two hundred and sixty samples examined, only four were reported as adulterated with chicory. In all of these cases the chicory was added by the vendor of bulk goods. All others were pure coffee.

Labelling of coffee compounds and mixtures is generally satisfactory, although in two instances the manufacturer was asked to give increased prominence to the words "compound" and "mixture" as required by section 6 of the Food and Drugs Act.

Cocoa

Several complaints were received as to the quality of ground cocoa offered for sale from bulk, the remarkably low price being sufficient to arouse suspicion. Of seventy-three samples examined, all were found to be entirely cocoa products without adulteration by the addition of added material. Some were found to be rather low in fat content, but a number of these were used in the manufacture of confectionery in which the flavour of the cacao bean is more important than the fat content. It is rather doubtful if a special standard for beverage cocoa is really necessary. One sample of package cocoa was

found to be misbranded as the name and address of the manufacturer was not printed on the label and there was no statement of net contents.

Diabetic and Invalid Foods

Thirty-four samples of products sold under labels indicating that they are specially suited to the needs of persons suffering from diabetes, have been examined specially for the content of glycogenic carbohydrate, while the packages of flours, etc., sold for this purpose were found to be true to label, the same cannot be said of many special products sold as diabetic breads, the great majority of which were found to contain, when examined by the diastase method, a proportion of glycogenic carbohydrate, not greatly different from that of ordinary bread. Labels and advertising have been corrected and the manufacturers warned. It is planned to continue this investigation and to institute prosecutions if such action is found necessary.

Dried Fruits: Dehydrated fruits, desiccated fruits (apples, pears, peaches, apricots)

Four hundred and ninety-three samples were submitted for analysis. Four large shipments were refused entry into Canada because the sulphite content exceeded the minimum specified in the regulations. Excessive amounts of sulphur dioxide may not only be injurious to the health of the consumer, but indicate that the fruit may not be sufficiently dried or that it may have been dangerously near to spoilage at some time during its preparation. The quality of the dried fruits passing through ports of entry shows a great improvement over that of previous years. One shipment of Canadian dried apples was found to be mouldy and wormy and, being unfit for food, was destroyed.

Dyes (Food Colours)

The Regulations under the Food and Drugs Act limit the artificial colours which may be used in foods to a comparatively few dyes which may be easily identified, not known to be toxic in the amounts employed and commercially obtainable in purified form. The dyes listed provide the primary colours (yellow, red and blue) in water-soluble and fat-soluble types. These are believed to be sufficient for practical purposes and a strict inspection was established to eliminate the use of unpermitted colours. Thirty-nine shipments were refused entry into Canada because of failure to meet the regulations. Importers have been advised to inform their principals abroad as to the standards established under the Act and during the last three months of the year very few shipments were found to be defective. It is planned to continue this work and to investigate the nature of the blends and mixtures supplied to confectioners and others.

Gelatine and Jelly Powders

One hundred samples of gelatine and jelly powders were examined. One brand of jelly powder was found to contain an unpermitted coal tar dye, but the use of this colouring matter has now been discontinued by the manufacturer. All samples of edible gelatine were found to be of satisfactory quality. A number of these samples were examined bacteriologically. As there is no evidence of the presence of any disease-producing microorganisms, it is not considered necessary to establish bacterial standards for edible gelatine.

Honey

Of forty-nine samples of honey examined, one contained a slight excess of sucrose. No other adulteration was found. It was necessary to advise the discontinuance of advertising proclaiming that honey is a natural food very rich in vitamins, when in fact it contains only a negligible amount of vitamin B, other vitamins being entirely absent.

Ice Cream

A standard for ice cream, effective on and after May 1, 1925, was established by Order in Council. In order to obtain definite information as to the observance of these standards, a special collection was made throughout Canada. It was found that of 171 samples analyzed, only twenty were found to have a fat content less than 10 per cent. Of these, fifteen were between 9 and 10 per cent. All others were of very satisfactory quality, indicating that the standard requiring 10 per cent of milk fat as a minimum is reasonable and can be complied with in commercial practice. Attention of manufacturers and dealers was called to the special requirements respecting labelling as specified in the regulations.

It is planned to apply a special inspection to this important food during the coming year.

Jams and Jellies

Seventy samples were examined during the year. One prosecution was instituted because of the sale of what purported to be an "apple jelly and strawberry jam." In this instance the proportion of strawberry jam was practically negligible. In general it may be said that the jams supplied to bakers for use in confectionery and pastry were found to be very inferior in quality. In one case an entire shipment was ordered returned to the factory for proper labelling. Samples of fresh fruits of various kinds and varieties were collected from different fruit-growing districts in Ontario and examined from the standpoint of pectin content and water-insoluble solids. Valuable information was obtained and it is hoped that this work will be resumed as soon as conditions permit.

Milk Products (Evaporated, condensed, powdered)

Sixty-nine samples of these milk products showed no adulteration whatever. One instance of defective labelling and advertising which was deceptive to the consumer was found and corrected.

Nuts (Almonds, Brazil, chestnuts, filberts, pecans, pignolias, walnuts)

The two hundred and forty-nine samples submitted for analysis represented questionable shipments entered at Customs. It was found in previous years that the inspection of nuts in retail stores was an endless task and quite impossible to undertake. At ports of entry there is opportunity to meet these goods in carload lots and inspection in this way is of real value. Last year several carloads were refused entry, but this year there was only one shipment which was ordered destroyed because of excessive insect infestation.

Nutmegs

The results obtained in the examination of seventy-nine samples of nutmegs show a great improvement over the quality shown in previous years. Following the ruling that the Food and Drugs Act does not allow the grinding of nutmegs defective in quality because of excessive moulds and worms, an active inspection was made of the grinding nutmegs passing through ports of entry. Some shipments were so heavily infested with insects that destruction was ordered; others were returned to the country of origin. An investigation of the moulds present in ground nutmegs is being carried on in order that we may obtain definite information as to whether or not the ground spice has been processed to conceal inferiority.

Olive Oil

One hundred and thirty-five samples were examined and of these two were found to consist of cottonseed oil and one was maize oil. Apart from these three cases no adulteration was found. There has been considerable difficulty

in securing proper labelling of import shipments of olive oil put up in tins and bottles. As it is a very difficult matter to judge the capacity of these containers by a mere visual inspection, it is important that the statement of net contents be placed conspicuously upon each package. Many of the European countries ship olive oil into the United States and mark their containers in terms of the American gallon, quart and pint. As the Imperial measure is the Canadian legal standard for measurement of volume, such shipments forwarded to Canada have been held in Customs until properly labelled. The American gallons, quarts and pints are equivalent to only five-sixths of the corresponding units in Imperial measure. Inspectors have found it necessary to refuse entry to shipments marked in American measure. Trade Commissioners abroad have been informed of this feature of the legislation and it is hoped that the detentions will be fewer in future.

Oranges

Five hundred and ninety samples examined represent the inspection of import shipments of citrus fruits. Heavy frosting was responsible for considerable damage to the orange crop in California. If this fruit is damaged by cold at certain stages in its development, the injury to the cell structure does not impair the outward appearance of the fruit as it ripens, but there is very likely to be a deficiency in juice. Several shipments were destroyed and one in which the damage was not so heavy was held until the fruit could be re-sorted.

Pickles

Forty-five samples of sweet and sour pickles were examined for preservatives and added colour. One sample was found to contain saccharine but no coal tar dyes were found. In one instance the preservative was not properly declared, salicylic acid being used instead of sodium benzoate. Stocks of one brand were held for correction of labelling with respect to net contents.

Raisins

Ninety-seven samples were examined specially from the standpoint of processing with mineral oil. It is claimed by some of the packing houses in California that a coating of paraffin oil protects the dried fruit against crystallization, extreme drying and infestation by insects. Although the oil may not be injurious to health, and the use of it in raisins cannot be called adulteration in the sense of the term as defined in the Food and Drugs Act, it is still desirable that other means be adopted, if possible, to accomplish these various purposes. No exception can be taken to the practice of coating the raisin with a small amount of oil extracted from the seed of the raisin itself, or indeed with any other edible oil, providing that such addition does not injuriously affect the food qualities of the fruit.

Soft Drinks

The regulations made by Order in Council April 8, 1924, prohibited the use of saccharine in beverages and in all other foods except those specially prepared for the exclusive use of persons suffering from disease, such preparation being preferably under skilled direction. Prior to that time a great many of the beverages contained saccharine which functioned partly as a substitute for sugar and partly as a preservative. Because of the change in regulations, it was necessary for certain manufacturers to make drastic alterations in their formulæ but there is now general compliance with the order. In the four hundred and fifty-seven samples examined, saccharine was not present, although there was some misbranding. A beverage purporting to be a fruit juice should contain no ingredient other than the actual juice of the fruit. A fruit drink described as "true or genuine" should not contain any ingredients other than

water or sugar or both, in addition to the juice of the fruit from which the beverage is named. It is maintained that mixtures of organic acids and sugar dissolved in water, artificially flavoured and coloured, should not be sold as genuine fruit drinks or as fruit juices. Beverages sold in bottles are in general properly labelled, although there has been no satisfactory disposal of the problem of controlling the labelling of such beverages sold from bulk. In beverages, as in many other lines, correct labelling provides the best protection to the purchasing public.

Sausage and Hamburg Steak

The Regulations under the Food and Drugs Act prohibit the use of colouring matter in or upon meat products and the use of preservative other than salt and spices in sausage is not allowed. Apparently the use of deceptive colouring matter has been generally discontinued, although in some districts there has been considerable difficulty in eliminating the use of preservatives, particularly sulphites. Two hundred and fourteen samples of sausage and hamburg steak were examined and thirty prosecutions instituted. It is thought that these will have the desired effect and it is hoped that the next collection will show a decided improvement.

Spices

Cassia and Cinnamon: Thirty-seven samples were found to be genuine.

Cloves: Of seventy-three samples, one was found adulterated with allspice. As a number of samples were comparatively high in fibre and ash, although within the limit specified by the standard, it is suspected that some of the clove stems which are imported appear ultimately in the ground spice. Unfortunately there is nothing in the Food and Drugs Act which prohibits the importation of clove stems.

Ginger: The samples analyzed were eighty-six in number and of these eight showed excessively high content of lime and four were deficient in cold water extract. An import shipment of exhausted ginger was held at Customs until properly marked to indicate its true character.

Mustard: Sixty-six samples of ground and prepared mustard were examined during the year. As 50 per cent of the samples from some districts showed adulteration with wheat starch and tumeric, this matter is being further investigated. There have been some complaints arising from the very inferior quality of *mustard compounds*. This is a very difficult matter to deal with because the goods are not stocked on the premises of the manufacturer, apparently being made up in small amounts for individual orders.

Mace: It has been suggested that a standard is needed for this article. Of thirty-two samples examined, seven show the substitution of Bombay mace for a considerable proportion of the genuine article.

Pepper

Cayenne: This article does not find a very large or continuous demand and the majority of the samples purchased from retailers showed deficiency in quality, although there was no evidence of the addition of foreign material. This indicates deterioration during storage.

White: Two hundred and sixty-two samples were examined. These were found to consist of pepper tissues only, without the addition of any material foreign to pepper. One-third of the samples examined from Ontario and Quebec showed an excessively high proportion of fibre and ash. This is undoubtedly due to the addition of pepper shells. A further collection is to be examined as soon as the pressure of work will permit.

Black: The results of analysis of two hundred and seventy samples, show that black pepper is generally of better quality than the white, although at some stations 12 per cent show excessive fibre and ash. Unfortunately it is not possible under the Food and Drugs Act to exclude entry to importations of pepper shells. As there is no possibility of framing a standard which would deal with this situation, it is hoped that legislation will be secured whereby Customs officials may be empowered to refuse entry of such material.

Sugar

Seventy-two samples of sugar were examined, particularly from the standpoint of colour and the statement of net contents of sacks. Several import shipments were found to be misbranded and were held until marked as required by the regulations.

Syrups and Molasses

The work done in connection with maple syrup was made the subject of a special report (see publication No. 35, Department of Health). In addition twenty samples of table syrup were examined, chiefly for the presence of undeclared glucose. All were found satisfactory from this standpoint. During the year there were three prosecutions arising from the sale of adulterated molasses.

Mineral Waters

Sixty-one samples were collected in the province of Quebec where the consumption of mineral waters is greatest. Many of these were found to be misbranded. In general there is difficulty in securing proper marking of bottles containing what are really carbonated salt solutions. The trade has, been fully advised as to the requirements of the regulations and it is planned to continue the inspection with a view to eliminating deception in the marketing of these artificial products.

Numerous samples of the following were also examined: Cocoa-butter, egg substitutes, mince meat, peanut butter, potted meats, tapioca, tea, figs, dates, biscuits, icing sugar, olives; alimentary paste (noodles, macaroni, spaghetti).

DRUGS

Acetyl salicylic acid, in powders and tablets sold also under the names *aspirin*, *acetophen*, etc.

The maximum amount of free salicylic acid found was 0.80 per cent, while only three samples of the tablets contained none. This free acidity has been traced to partial decomposition, the greater part of which appears during the process of tableting and subsequent storage. With respect to the amount of aspirin contained in the five grain tablets, a great improvement was noted over the condition found a number of years ago. In the great majority of the samples the deviation from the five grain weight was not greater than would be regarded as consistent with good commercial practice. The only sample to which exception might be taken was found to contain 4.61 grains instead of five grains as declared on the label.

Aromatic Spirits of Ammonia: Of twenty-one samples examined, twelve were found to be consistently in ammonia, ammonia carbonate and carbamate. One found to be consistently inferior was inspected at the source of manufacture and it was found that the manufacturer's stock was also defective. The necessary adjustments were made immediately.

Tincture of Aconite: Of nineteen samples examined, thirteen were adulterated or misbranded. There was great variation in the alkaloid content which

ranged between 0.000 and 0.061 per cent. The pharmacopoeial requirement is 0.040 per cent with deviation of plus or minus 0.0027. This indicates a very undesirable condition and the matter will be followed up by further and more extensive collections from all parts of Canada.

Camphorated Oil and Camphor: Of the fifty-three samples of camphorated oil examined, only three were found deficient in camphor. This shows a great improvement over previous collections of this article.

Fourteen samples of gum camphor were all found to be genuine, indicating that the artificial camphor which appeared on the market a few years ago is no longer used as a substitute for the genuine.

Spirits of Camphor: Seventy samples were examined and twelve of these were found deficient in camphor. An even more serious form of adulteration was found in that methyl hydrate and rubbing alcohol had been substituted for pure alcohol as required. It was necessary to institute legal proceedings to stop the practice of this dangerous substitution and penalties amounting to sixty dollars were collected from the manufacturer.

Fowler's Solution (Liquor arsenicals): Of fifty-seven samples examined, thirty-three were adulterated, mainly because of deficiency in arsenic although one sample showed one-third more arsenic than required by the Pharmacopœia. As this preparation is not unstable and arsenious oxide, the chief ingredient, is cheap and easily obtainable in comparatively pure form, the deviations from standard must be indicative of carelessness in preparation. A further survey will be made of the market in this article, particularly from the standpoint of the concentrates which are supplied by the wholesalers.

Chloroform Liniment: Of twenty-seven samples examined, eleven were found to be deficient in quality. Some were made with cottonseed oil and others contained insufficient camphor.

Cream of Tartar: Of fifty-one samples examined, only one was of doubtful purity, the others being genuine and of standard quality. Three cream of tartar substitutes were found to consist of acid sodium phosphate with starch.

Witch Hazel: Twenty samples were collected and analyzed. Three of these were adulterated, one being prepared without any alcohol and two others contained methyl alcohol without being labelled as required. The legislation administered by the Excise Department required that articles containing methyl alcohol shall be labelled "Methyl Hydrate—Poison" in conspicuous type. Breaches of this regulation are referred to the officers of that department.

Friar's Balsam: Twenty-four samples were examined, especially for wood alcohol or methyl hydroxide. All were found to be of satisfactory quality.

Hydrogen Peroxide: Twelve different brands examined were found to meet the requirements of the Pharmacopœia. Apparently certain other brands which were defective in previous years are now off the market.

Seidlitz Powders: Twenty-three samples were examined and found to be full weight and of proper quality with but two exceptions. In one, citric acid was substituted in part for the tartaric acid and another brand was improperly packaged. The deficiencies noted in previous years were not observed.

Tincture of Iodine: Of one hundred and thirty-seven samples examined, nearly half were found adulterated or misbranded. Deficiency in alcohol or a percentage of iodine deviating from that specified in the Pharmacopœias or in standard works on materia medica or drugs, constitute adulteration. Methyl alcohol was found in one sample. The requirements of the Food and Drugs Act have been brought to the attention of all manufacturers of this article and it is hoped that with a clear understanding of the law, improvements in quality

will follow. If the revision of the British Pharmacopœia now in progress does not recognize and so legalize some of the variations already commercialized, it will be necessary to take drastic action to prevent the unnecessary multiplication of preparations sold under this standard name.

Sweet Spirits of Nitre: Twenty-nine samples were examined and of these three were found to be deficient in quality. Two of these representing the stock of a manufacturer were collected because a preliminary sample obtained in the retail trade was found to be sub-standard. This stock was withdrawn from sale and the necessary adjustments made. Apparently the retail druggists are taking some care in the storage of this unstable preparation.

Tincture of Nux Vomica: Of fourteen samples examined all were found to be low in strychnine. This preliminary survey of the market was followed by a general collection which is ready for analysis. The results when obtained will be made the subject of special report.

Lime Water: Of forty-nine samples examined, thirty-two were deficient in lime, one showing only 0.003 per cent instead of 1 per cent as required. Previous collections of this article have shown approximately the same condition. Although it is realized that lime water is not a powerful drug, still it is an imposition on the purchasing public for a retailer to sell at fancy prices, and under standard name, something which is in reality little better than tap water, in so far as lime content is concerned.

Ether for Anæsthesia: Eighteen samples were examined following a complaint submitted to the department because of complications in certain operative cases where it was alleged that the anæsthetic had been causing trouble. Samples were procured from several hospitals and their chemical composition considered in conjunction with the reports of the anæsthetists. It is intended that this matter be further investigated as at the present moment there appears to be no relation between the chemical analysis of ether and the results of its use in general anæsthesia. Samples in connection with which there was definite complaint were found to meet the pharmacopœial requirements; others said to be satisfactory were decidedly defective when judged by pharmacopœial standards.

Headache Remedies: The inspectors submitted two hundred and thirty-three samples of headache remedies sold as such over the retail counters and all parts of Canada contributed to this collection. This will be made the subject of a special report.

Proprietary or Patent Medicines and other Preparations sold under Distinctive names

When a preparation is sold under a distinctive name not recognized in any of the Pharmacopœias or to be found in any recognized standard work on Materia Medica or Drugs, it must either be assigned a number under the Patent or Proprietary Medicine Act or sold under labels bearing complete list of medicinal ingredients.

Thirty-two such preparations were examined during the year. Certain so-called radium preparations were found to possess no radio-active properties whatever. One stock of patent medicine was found to contain excess acetanilid, the amount present being greater than the limits set by the Advisory Board and the variations exceeded the limits of good commercial practice.

Two *catarrh remedies* in which it was suspected that cocaine was present were found free of narcotic drugs. Claims made for an *Elixir of Pepsin* were found to be exaggerated and extravagant as the preparation showed no enzyme activity.

In several instances it was found necessary to make seizures and to exact penalties because of neglect to observe the requirements of labelling with respect to alcohol. Two preparations said to contain no alcohol yielded on analysis 86 per cent and 17 per cent alcohol respectively. In two others methyl alcohol was present without declaration on the label as required. In all cases the manufacture was either discontinued or adjusted to meet legal requirements.

FOOD AND DRUG INSPECTION

Twenty-six Inspectors were engaged in this work. Special attention was paid to the inspection of import shipments at ports of entry. Entry was refused to many shipments including food colours, packaged spices, nuts, tomato paste, beans and oranges.

Inspection of labels is a very important feature of this work. Every year shows an increase in the number of packaged foods offered for sale and an effort is made to protect the rights of the purchasing public by insisting on a full measure of truthful statements on the labels. A label may be deceptive not only because of the statements made, but also by inference from what is omitted. The inspectors endeavour to accomplish the desired results without resorting to prosecution, but in some cases they must institute legal proceedings, particularly if adulteration or misbranding is wilful and persistent. The following is a summary of the cases for the year:—

Prosecutions

| | |
|--|-------|
| Convictions.. . . . | 10 |
| Voluntary payment (Sec. 19, Food and Drugs Act) .. | 27 |
| Unfinished.. . . . | 2 |
| | <hr/> |
| Total.. . . . | 39 |

These cases arose from the adulteration or misbranding of the following:—meats (including Hamburg steak and sausages), maple syrup, maple butter, molasses, caramels, jams, and spirits of camphor.

LABORATORY OF HYGIENE

Investigation relative to perfecting of Endo's medium for differentiation of the typhoid-dysentery group of bacilli from that of the *Bac. coli* group was concluded in a most satisfactory way, and published by the department.

An extensive sanitary survey, combined with laboratory examinations, of the oyster beds in Prince Edward Island and New Brunswick occupied several weeks during the past summer and fall, resulting in the effective protection of shippers from these provinces in the export trade to the United States, permitting them to meet the sanitary regulations of that country.

Water analyses have been made on behalf of the department's sanitary engineer looking to the protection of our travelling public on lake and river vessels, and allowing thereby our vessel owners to meet the regulations of the United States Government relative to proper water supply on boats engaged in international traffic.

Examinations of suspected spoiled canned goods, sausages and cheese and bacterial products have been made in the interest of the Food and Drugs Laboratory and Customs and Excise Laboratory.

A paper is in press dealing with a method of standardization in the preparation of bacteriological media.

Investigations are proceeding dealing with the life-history of *Protophagus bacteriophagus* (*bacteriophage d'Herelle*); with the question of the existence and properties of typhoid toxin; and with principles concerned in effecting better structural arrangements for incubator rooms for bacteria.

In the interests of the medical profession, report of investigative work was published in the April number of the Canadian Medical Association Journal entitled "The Potency of Tinctures of Digitalis and Strophanthus purchased at various points on the Canadian Market." This report consisted of a review of the reasons for variation in the potency of tinctures, the methods of standardization and the results of analysis of twenty-four samples of tincture of digitalis and twelve samples of tincture of strophanthus purchased in local drug stores in Halifax, Montreal, Ottawa, Toronto, Winnipeg, and Vancouver. Analyses showed a wide variation in the strength of these tinctures and the need for control in order to get standard and constant potency in these tinctures.

Continuing this line of investigation, a survey is being made of the potency of extracts of ergot purchased at various points in the Canadian market. A survey will also be made of the potency of thyroid gland and pituitrin dispensed in various drug stores in the certain centres of the country during the coming year.

PUBLIC WORKS HEALTH ACT

The Inspector of the Department of Health for Eastern Canada gives the following report of the medical and sanitary services of the Welland canal, which is the chief work being carried out by the Dominion Government at the present time.

The canal is divided into a number of Sections, viz., 1 to 8. Work was practically completed on Sections 1 and 2 at the time of inspection, only about forty men being employed at Porters' camp, which is conducted by the contracting firm of Porter Brothers. This camp was found to be in good condition, the only defects found being due to lack of proper fly screens in dining room and latrines.

At lock No. 3, at a point close to the intersection of the present and new canal, two old buildings which were occupied by about forty men were condemned as totally unfit for habitation. Both houses were in a complete state of disrepair and overrun with rats. Unfortunately it was found that the Public Works Health Act did not give authority for closing these houses and it became necessary at a subsequent date to draw up a number of amendments to the Act to permit of the closure of such houses.

As one of the chief objects of the present tour of inspection was the prevention of pollution of the canal water by dredging companies operating in Sections Nos. 7 and 8 in the neighbourhood of Welland, Humberstone and Port Colborne, a visit of inspection was paid to these sections in company with the Chief Assistant Engineer of the Welland canal and the Sanitary Engineer of the Department of Health. Dr. W. G. Reine, health officer of the city of Welland, was visited and the question of the pollution of the canal water from which the city of Welland derives its water supply was discussed. It was ascertained that a Water Commission had been formed in the city of Welland, which had at the time under consideration the provision of a pure water supply for the city, and that the Department of Railways and Canals had withheld their contracts for one year so as to give the city of Welland time to make the necessary installation of apparatus to insure such a supply of pure water.

Only a small amount of dredging was being done at the time in the vicinity of Welland. This was for bridge substructures and did not create objectionable silting of the water in the present canal.

At Port Colborne the representative of the C.S. Boone Company agreed to attach steam receptacles to the outlets of water closets on board their dredges, so as to avoid polluting the canal water in the vicinity of the city of Colborne.

At the time of the visit it was found that there was an outbreak of typhoid at Humberstone. Humberstone is a small town adjoining the town of Port Colborne and, like Port Colborne, is situated on the canal. Water is provided for the homes by wells and the sewage of the houses is disposed by means of cesspools. The cesspools and wells are in most cases very close to one another. The soil varies from four feet to twelve feet in depth. This soil is saturated with sewage from the houses and the wells are polluted. Arrangements are now being made by the town of Humberstone to obtain a pure water supply from the new purification plant of the town of Port Colborne.

The Health Board which was created during the summer of 1924 has proven to be of benefit. A sanitary squad was organized under the direction of this Board which maintained the sanitary arrangements of the various camps in good order. The contractors grumbled a little at being obliged to carry out the orders of this squad and pay the small amounts occasioned by their services.

Surveillance of the drinking water and inoculation of the employees at Port Colborne was satisfactorily carried out during the summer by the medical services of Dr. McCombe and with gratifying results. A reference to Dr. McCombe's report of March 31, 1925, for the fiscal year gives a summary of the cases treated.

Some changes have been made in the medical arrangements this year, Section No. 7 being awarded Dr. Davis of Welland. During the coming summer camps will be erected in this section and it is the intention to inspect them on their completion. Decided and satisfactory progress has been made in the prevention of further pollution of the water of the Welland canal and in the maintenance of the sanitary services of the various camps. The medical services of Dr. McCombe are satisfactory and every facility and assistance has been afforded both Dr. McCombe and his assistants for making a thorough inspection. They are desirous of co-operating with and aiding this department in enforcing the regulations of the Public Works Health Act.

A report has been received from the Director of the Medical Services of the Rouyn Railway, now under construction, indicating that the sanitary arrangements and medical services are being maintained, with a few exceptions, in a satisfactory manner. An inspection of this work will be undertaken at the earliest opportunity.

HOSPITALIZATION AND SANITATION

HOSPITALIZATION

The province of Saskatchewan was furnished at the request of the Deputy Minister of Health of that province with tentative plans covering proposed hospital at Ile-a-la Crosse, Sask. Intensive study was given to the insulation of this building owing to the climatic conditions which obtain in the locality wherein the hospital is to be built. One of the results being that, it is anticipated, a saving of 50 per cent of fuel will be effected thereby, and at the same time rendering the temperatural conditions in the summer of such a character as to advance the therapeutic value of the hospital.

The value of gypsum as an insulator is now being appreciated in Canada to such an extent that not only hospitals but other buildings generally, including residences and laboratories, are taking advantage of this method of insulation.

A comprehensive compilation covering the subject of institutional care of mental defectives was prepared by the Division and distributed to the members of the Dominion Council of Health. The data called attention to the

inherent blunders which have been made from time to time in the planning of such institutions, as also valuable advice furnished covering the requirements incidental to such buildings for the care of mental cases. Further, standard plans were included in this compilation which will furnish a standard basis for the planning of such buildings in the future.

Many inquiries were received throughout the year seeking information covering the requirements of hospitals situate in outlying districts. Sketch plans were furnished from time to time in answer to such inquiries. There is a wide field in this direction for furthering the betterment of hospital planning in rural districts.

The demand for the publication issued by the department under the caption "Planning of Small Community Hospitals" has been most pronounced.

The quarantine stations of the service, maintenance of which is now generally operated by the personnel at the various stations, have shown a great improvement by the study which has been given by this division to the particular problems relating to buildings and equipment at each individual station.

Radio talks have been given covering matters of interest to the general public concerning lighting, colour, and ventilation.

The Food and Drug laboratories both at Winnipeg and Ottawa were replanned and remodelled to meet present requirements.

SANITATION

The architects of the Solarium, Mill May, Vancouver island, B.C., consulted the department upon the most desirable sewage installation to meet the conditions which obtain in that locality. Information was furnished and particular emphasis laid upon the necessity of giving careful consideration as to location of outlets to avoid the current or tides creating a backwash of sewage toward bathing beaches. Further, the necessity of installing grease traps under kitchen and laundry wastes was emphasized, thereby preventing clogging of drains.

A steadily increasing demand is being made by the public for the publications covering sewage treatment and water supplies for isolated dwellings and buildings. In fact hardly a week passes but that some detailed inquiry from persons who are interested in this phase of public health is received. The railway companies have evinced a distinct interest in these brochures since the publications cover problems which intimately concern them in the isolated dwellings consequent upon their activities. It is the intention at some future date to add more data to these publications with a view of furnishing the public the benefit of research work which has been and is being carried out by the division from time to time.

Questionnaires were sent out to the various provinces, as also to the authorities of the different states of the United States with a view of drafting a sanitary code for camps, health and summer resorts. The response to same have been gratifying and prove conclusively that there is a distinct urge for uniform sanitary codes for such places throughout the Dominion.

The committee of traffic control of the city of Ottawa consulted the division as to the many phases entering into the question of traffic control in cities, more particularly as concerning the health of the people.

At the conference of the Town Planning Institute of Canada held in Montreal a paper was given on "Planning Developments of the Suburb," emphasizing the necessity of avoiding excessive concentration and the advisability of distribution of population in more numerous centres.

Many inquiries were received and plans furnished covering desirable farm houses.

Industrial mining and consulting engineers in various parts of the country have consulted the division upon problems incidental to the sanitation advisable for industrial mining districts, which, it would appear from such inquiries, is now demanding very serious consideration from those interested in such undertakings.

Ventilation of schools and other buildings have been the subject of close study and in co-operation with the American Public Health officials a program is being initiated with a view of having local school authorities carry out certain experimental investigations.

The American Consular Service sought information from the division upon sewage irrigation of crops in Canada and in response thereto a detailed precis was given covering the whole question of sewage irrigation more generally known as "Broad Irrigation." Briefly a high degree of purification may be accomplished by this method, but it is open to several objections such as difficulty of securing land near centres of population, local opposition, failure to make the cultivation of crops remunerative, difficulty of harmonizing the growing of crops with the demands of sewage purification at all seasons, and, lastly, the expense of pumping sewage.

POLLUTION OF THE INLAND WATERS OF CANADA

The supervision of supplies of water for drinking and culinary purposes on vessels engaged in navigation on the inland waters of Canada is carried on under the authority of section 4, subsections (d) and (f), of the Act of Parliament that created the Department of Health and Order in Council (P.C. 1091) dated June 19, 1923.

Work on this question was carried on throughout January and February, 1926, through the medium of a series of lectures that were given at the Schools of Navigation and Marine Engineering that are situated at various ports on the Great Lakes system. In this manner it was possible to get into contact with the coming generation of ships' masters and engineers under the best circumstances and at a time when questions could be asked and answered. The actual field work commenced about the middle of March, 1925, and was carried on until the end of November. The data for the report submitted has been gathered throughout the above period.

During 1923 and 1924 it was only possible to check up the quality of water available for drinking and culinary purposes aboard vessels engaged in navigation on the Great Lakes and inland waters of Canada. It is possible, however, to present with the report for 1925 additional information of a similar character, as well as a short table, showing the results of the examination of a number of samples collected from the drinking water available for the use of the public on passenger trains of various railways in the province of Quebec. In this connection it is of interest to note that the total number of passengers carried by the railroads of Canada during the year ended December 31, 1924, was 42,921,809 persons.

During the season of 1925, a total of 908 routine visits to Great Lakes' vessels were made by health officials, in addition to which certain examinations of steamship water supply systems were carried out in response to special request by steamship operators.

Throughout the season very considerable progress has been made by certain of the steamship companies in bringing the water supply systems of the various vessels operated by these organizations into line with the requirements of the regulations. Particularly notable in this regard were the efforts of the Canada Steamship Lines, the George Hall Coal and Navigation Company, and

the Eastern Steamship Company. Similarly all new steamships launched from Canadian shipyards on the Great Lakes system have been properly equipped.

The general plan underlying the work done was the application of the regulations concerning water for drinking and culinary purposes to vessels engaged in navigation on the Great Lakes and St. Lawrence river; a wider distribution of the regulations to all persons concerned in the operation of vessels on the inland waters of Canada, and the continuation of the examination of the conditions prevailing relative to the supply of a potable water for drinking and culinary purposes on Great Lakes steamships.

As during the seasons of 1923 and 1924, this involved the physical examination of the pumps, piping, tanks, outlets and water purification apparatus, if any (in addition to a quick reconnaissance of the vessels themselves for possible sources of contamination of the water supplies), in order to determine the eligibility of the various passenger steamships for the certificates required by Order in Council (P.C. 1091),

In addition to the physical examination of water supply systems installed on various steamships, information and advice of a technical nature was supplied to navigation companies. Plans of proposed water supply systems for new steamships in course of construction, on being submitted for the approval of this office were duly checked up and corrected when such seemed advisable.

During the season visits were made to the docks at the terminal ports of the various fleets of steamships engaged in this traffic and correspondence and interviews with health and navigation officials and other persons concerned were carried on regarding the certification of water supplies ashore, compliance or non-compliance with the regulations for maintenance of water supplies of standard quality and other related matters, etc. In this connection it was possible to greatly improve the water supply service at the dock at Sault Ste. Marie, Ont.

Considerable co-operative work was carried on as in former years, with the representatives of the United States Public Health Service, by mutual visits to international points. Through the medium of the mails reports of inspections of vessel water supply systems, water analyses reports, certification of shore water supplies, lists of steamships certificated, etc., were exchanged. So also, by arrangement with the United States Public Health Service, intermittent inspection of vessel water supply systems on Canadian steamships passing through Sault Ste. Marie, Michigan, was carried on by the health inspector stationed at that point.

Throughout the season steamship companies operating vessels in Great Lakes' traffic have been supplied, regularly with copies of water analyses reports and wherever it has seemed advisable, attention of the management of these organizations was drawn to flagrant carelessness or violations of the regulations.

A measure of the size of the problem presented in the supervision of vessel water supplies is given by consideration of the following facts.

The through St. Lawrence and Great Lakes route, between Montreal and the head of lake Superior, comprises 74 miles of canal, with 49 locks and 1,140 miles of river and lake waters, or a total of 1,214 miles. From all sources and for the several kinds of freight that make up the commerce of the Great Lakes, seventy additions were made to the fleet in 1923. Never before in the history of the lake trade were so many vessels brought into the fleet in a single year. These additions to the fleet included bulk freighters of the most modern type, a self-unloading stone carrier, a self-unloading cement carrier, two different types of motor ships for lake and coastwise service, an array of new ships of Welland canal size for the grain and coal trades and a former lake steamer returned from the sea trade.

The Canadian fleet was augmented by the addition of forty-two steel bulk freighters, of which number twenty-five were built in British yards and delivered to the lakes for the grain and coal trades. The newly established Tree Line Steamships Limited, a subsidiary of the Ogilvie Flour Milling Company of Montreal, brought to the lakes from France a fleet of ten steamships that are practically new. Total additions to the fleet did not end here, however, for the attractiveness of the grain rates brought fourteen small cargo carriers from overseas ports, so that the number of vessels available for the grain trade to Montreal was the largest in history. In a recent season 5,791 vessels arrived at Montreal from ports on the inland waters.

The large fleet of Canadian-owned steamships of Welland canal size was increased by eleven ships that were built in Great Britain and brought overseas to the Great Lakes in 1925. All were in the grain trade during the late season of navigation. Three of these vessels were built for the Mathews Steamship Company, whose fleet has been increased by eleven steamships in the past four years; three others were built for the Canada Steamship Lines.

The most recent information available shows that during the season of 1925 there were twenty-four new steamships added to the Great Lakes fleets. The total number of vessels operated by such Canadian steamship organizations as the George Hall Navigation Company, Eastern Steamships Company, Great Lakes Transportation Company, all being increased. Canadian shipyards on the Georgian bay added five bulk freighters to this steadily increasing trade in the one season.

Enormous as the shipbuilding program proved to be in 1925, lake and foreign yards are building vessels for delivery in 1926. Five double-deck package freight and bulk carriers are being built in a St. Lawrence river yard for the Canada Steamship Lines; six steamships of Welland canal size are under construction in Great Britain for the Eastern Steamship Company of Canada. There is also in process of construction, at Midland, a bulk freighter that will be 633 feet long over all, 70 feet beam and 33 feet in depth. When launched she will be the greatest in length and broadest in beam on the Great Lakes system.

The relative size of the Great Lakes traffic is given by comparing the number of vessels passing through the Sault Ste. Marie canals with the number of vessels that annually pass through the Panama and Suez routes. The total number of commercial vessels that passed through the Panama canal for the year ending June 30, 1925, was 4,673, which was almost twice as many as transited the canal in any year up to 1921. For the fiscal year 1924 the traffic of the Suez canal totalled 5,121 ships. The total number of vessel passages through the canals at Sault Ste. Marie, Michigan, and Ontario for the season of 1925 was 20,650, or double the combined total of the Panama and Suez canals.

Similarly records of commerce passing through the Detroit river during 1925 show a total of 32,062 vessel passages, as compared with 28,118 for the preceding year. (About 15 per cent increase.)

In the period between April 15 and December 17, 1925, there were 5,108 vessel passages through the Welland canal, as compared with 4,761 vessel passages for the season of 1924. These figures do not include vessels which entered the canal and discharged cargo without passing entirely through the canal.

A report from the Harbour Commissioners at Toronto shows that in 1924 the total arrivals and departures of vessels of all types for that port was 4,422, the vessel passages for passenger steamships being 3,176.

The traffic via the St. Lawrence canals in 1925 was the heaviest in their history. The number of vessels, the registered tonnage and the tons of freight

for 1925 were the greatest on record. The Canadian tonnage was heavier than the 1924 tonnage, which was the previous high record, by eleven per cent.

That the supervision of water supplies on vessels navigating on the inland waters of Canada constitutes a problem that annually increases in size is illustrated by the following statement covering the traffic of 1925. There was a net increase in freight traffic on all Canadian canals last year of 1,261,570 tons, as compared with 1924. Of a total of 14,130,667 tons of freight transported through the canals 89 per cent was carried in Canadian vessels.

The traffic through the combined Canadian and United States locks at Sault Ste. Marie showed an aggregate of 69,237,687 tons, an increase of 11,945,-726 tons as compared with 1924.

Traffic on the Welland canal showed gains in vessel tonnage and freight, the former of 550,625 tons and the latter of 602,886 tons, eighty-eight per cent of the total freight being transported in Canadian bottoms.

Total shipments without transfer of 14,337,676 bushels of grain to Montreal and Quebec have no precedent, and are accounted for by the increasingly large fleet of steel Canadian steamships that have entered the lake service during the past twenty-four months.

With regard to the responsibility for the supervision of the supplies of water for drinking and culinary purposes on passenger steamships engaged in other than ferry service on the Great Lakes system, a general division of the traffic is as follows:—

On the lake Ontario-St. Lawrence river routes the passenger traffic is carried almost entirely by steamships of Canadian register. These vessels obtain their supplies of drinking and culinary water partially from certified sources ashore and partially from overboard en route. As, with only three exceptions, water purification apparatus has not been installed on these passenger steamships, the drinking and culinary water available is subject to contamination, depending on the regularity with which the storage tanks and distributing systems have been flushed and chlorinated.

On lakes Erie and Michigan, practically all of the passenger traffic is carried by steamships of United States register. The culinary and drinking water supplies are safeguarded aboard these vessels, by water purification apparatus of approved type.

On the lakes Huron-Superior service, data supplied from official sources, shows that steamships of Canadian register in 1924 carried sixty-seven per cent of the travelling public. By the installation of water purification apparatus of approved type, and careful supervision of its operation it has been possible to greatly improve the drinking and culinary water supplies on these steamships and bring them to the standard of the regulations.

It is a matter of more than passing interest to note that steamships fill their boilers from the hydrants of the municipal systems at ports such as Goderich, etc., before leaving port at the beginning of the season. Great care is taken to avoid a deposit in the boilers of mud and silt from the water of the harbours. In this regard the question immediately arises—why is not the same caution exercised when the drinking water tanks are being filled?

The congestion of shipping that takes place at times in Great Lakes ports is illustrated by the accompanying photographs. The water in the harbours is not only contaminated by the discharge of sewage from the adjacent municipalities, but it is also subjected to the additional contamination caused by the discharge of sewage, etc. from the assembled steamships. The attention of the Canadian Dredging Company was called to this particular point and a method of sterilization of sewage by live steam indicated for application to dredges at work near waterworks intakes.

Until changes were made quite recently certain of the port towns obtained their municipal water supplies adjacent to the harbours. During the season of 1924 Port Colborne installed a filtration system and a liquid chlorination scheme, while the town of Goderich had its waterworks intake pipe extended to a point outside of the breakwater in addition to using a chlorinating system to protect its water supplies.

The necessity for a continued check on vessel water supplies, although the regulations have been in effect for over a year and a half, is well illustrated by the following example. Four cases of typhoid fever having been hospitalized in the marine hospitals of this department from the ss. *Mikula*, a request was made for a special examination of the water supplies available aboard this steamship. It was found that the following insanitary conditions existed:—

- (a) Water for drinking and culinary purposes was obtained from a non-certified source.
- (b) The tanks for storage of the drinking and culinary water were formed from the hull and a deck of the vessel.
- (c) There was a by-pass connection between the sanitary water supply lines and the piping for the drinking water service.

It is of interest to note that for the first time in almost half a century the shipping season on the Great Lakes has closed without any loss of life or the total loss of a Canadian vessel due to accidental reasons.

The typhoid fever rate of a community is usually accepted as furnishing an indication of the sanitary quality of its drinking water and food. Unfortunately it is somewhat difficult to obtain statistics of sickness of former passengers after they have left the steamships. The reservation book of a single tourist vessel will frequently carry the names of passengers from points scattered over the entire area from Halifax to Vancouver. A measure of the typhoid rate for the crews of Great Lakes vessels is, however, available in the records of the hospitals at the various ports.

That the economic loss from the ravages of typhoid fever is still unnecessarily great on Canadian vessels is shown by the statement that the number of cases of typhoid fever reported as originating aboard vessels of Canadian register is still over three times as great as the number reported as originating aboard vessels of United States register, although the total number of vessels of United States register is more than twice as great as the total of the Canadian fleet.

The typhoid fever situation on vessels engaged in traffic on the inland waters of Canada during 1924 constituted a greater menace to the health of the general public than the Owen Sound epidemic of last summer. There was not only a greater number of cases of typhoid fever reported as originating from sources aboard these steamships but there was also the added danger of spreading the infection over a much greater area.

It is perhaps more than a matter of mere coincidence that the epidemics of typhoid fever at Port Colborne in 1924 and at Owen Sound in 1925 occurred at a time when dredging operations were being carried out in the harbours of these ports.

Patients who have developed typhoid fever aboard steamships on the inland waters of Canada have been admitted to hospitals over the entire area of the Great Lakes system, from Montreal to Fort William.

While typhoid fever has been somewhat reduced in the lake Superior region there has been an increase in the number of cases reported from the Georgian bay and lower lakes district in the past two seasons corresponding with the great increase in traffic in these waters.

With reference to table No. 6 it will be seen that patients suffering from typhoid fever have been put ashore from eight additional Canadian vessels within the past twelve months.

While there has been a measureable improvement in the quality of the water supplied for drinking and culinary purposes aboard a considerable number of the Canadian vessels engaged in navigation on the inland waters of Canada, much remains to be done before typhoid fever will be eliminated from this shipping.

In tracing the connection between vessel water supplies and typhoid fever, a considerable amount of statistics has been assembled. Such sources have been drawn upon as the annual reports of the various provincial Departments of Health, special reports from medical officers of health, superintendents of hospitals, etc., at various ports on the Great Lakes system.

As indicated in the table of typhoid fever statistics, the province of Quebec had the greatest number of cases of typhoid fever and also the largest number of deaths from that cause in the year ending June 30, 1924. Owing to the large number of passenger steamships engaged in tourist traffic that pass through such port cities as Montreal and Quebec, it seems advisable that analyses of the drinking and culinary water supplies of these steamships should be made at frequent intervals in the near future. An investigation made in the summer of 1925 by the Department of Health of the State of New York traced the origin of the illness of an American tourist to a Canadian passenger steamship that sails regularly between Montreal and the Saguenay district.

If pace is to be maintained with the marvelous growth in the past three years of vessels of Welland canal size an official should be stationed in the Welland canal district for a considerable portion of the period of navigation in 1926. In this way a check can be kept on the water supplies available on vessels operating on the lower lakes and bring them up to the standard maintained on vessels navigating on lakes Huron and Superior.

During 1925 a visit to one of the large passenger steamships that ply between Montreal and the lower St. Lawrence river disclosed the condition that the crew's drinking water tap was located quite close to the deck that formed the floor of a stable maintained aboard this vessel for the transport of horses. A pure supply of drinking water can only be maintained by constant vigilance and regular inspection.

In subsection (b) of section 7 of the regulations it is required that "Ice used for cooling table water shall be a clear and sanitary ice and shall be stored in a clean place and before the ice is placed in the water or water receptacle it shall be carefully washed and handled in a sanitary manner."

Serious doubts having arisen, in the minds of the officials in charge of the laboratory of health at Sault Ste. Marie, Ont., as to the observance of the above regulations, samples of ice were collected from all of the passenger steamships that called at that port during the season of navigation of 1925.

In a large number of instances it was found that the ice in use had been taken aboard at the most convenient point in the form of natural ice. It was noted that on the steamships *Noronic* and *Hamonic* of the Northern Navigation Company, arrangements had been installed for the manufacture of artificial ice aboard ship.

The samples of ice were examined in accordance with the approved method of the American Public Health Association, identical with that used in examining all samples of water collected from steamships at Sault Ste. Marie. Cultures were made as soon after sampling as possible, in many cases as quickly as the ice melted. In order to make sure that the portion of water added to the culture was representative of the whole sample, the water was thoroughly stirred with the sterile pipette used.

As a result of the work done regarding ice, it was demonstrated, that artificial ice of good sanitary quality may be procured and handled in such a manner that its purity will remain unimpaired. The use of artificial ice in all cases for placing in drinking water or with salads and fruits, in the dining salons, would of course be a good method of avoiding contamination from the ice. The installation of ice-making machines would be another good method of providing good ice. Many freight carriers have such apparatus in use at the present time so that it is surprising that so few passenger steamships have such equipment.

Table No. 7 gives the number of passengers that were carried by a few of the larger steamships engaged in Great Lakes' traffic to Canadian ports. No figures are as yet available for the twenty or more steamships that are operated in passenger traffic by the Canada Steamship Lines Limited.

This report is in reality a summary of the results of the co-operation of various health officials at Great Lakes ports and the definite efforts of seventeen of these persons to secure the maintenance of supplies of water for drinking and culinary purposes of the standard of the regulations. As during the seasons of navigation of 1923 and 1924, vessels have been boarded by Canadian health officials at the ports of Montreal, Toronto, Chatham, Windsor, Owen Sound, Midland, Port McNicoll, Sault Ste. Marie, Port Arthur and Fort William. The findings of the subsequent analyses have emphasized the necessity for general compliance with the regulations and have been also a powerful aid in accomplishing the improvements made to the water systems of various vessels.

That the work done has been appreciated by the steamship companies is shown by the letters to that effect now on the departmental files. In this respect the statement of the Secretary of the George Hall Navigation Company is characteristic. He said: "It costs us money to train men to operate our steamships—if they are taken ill we have to pay hospital expenses and in addition we have to pay out money to train other men to take the positions made vacant by sickness."

Throughout the season of navigation correspondence with various steamship companies has been very much greater than previously. Many more bacteriological reports on vessel water supplies have been forwarded to vessel owners for their information, and action when necessary. In addition to routine discussions with vesselmen, interviews were had with head office officials of most of the transportation companies concerned.

That since we took up the work there has been a reduction in the number of typhoid patients put ashore at Fort William from Great Lakes vessels is indicated by the figures for 1923 and 1925. In 1923 our records give the number of typhoid cases from Great Lakes vessels as fourteen while the returns for 1925 show no cases from this source.

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1925

| Vessels boarded by health officials | Port | Number of analyses of water supply | Remarks |
|-------------------------------------|---------------|------------------------------------|---|
| Cape Diamond..... | Quebec..... | ..... | Water used by crew for drinking purposes was found to be held in a large wooden barrel at rear of compartment where horses are stabled. Tap within 12 inches of deck on to which manure and stable refuse collect—a very insanitary arrangement. Drinking and culinary water obtained from the municipal system at the docks of Quebec. <i>Doubtful quality. Vessel engaged in carrying passengers.</i> |
| Colima..... | Quebec..... | ..... | Water for drinking and culinary purposes obtained from municipal system at Quebec docks is of <i>doubtful quality</i> . |
| North Shore..... | Quebec..... | ..... | Water for drinking and culinary purposes obtained from municipal system at Quebec docks is of <i>doubtful quality</i> . |
| Gaspesia..... | Quebec..... | ..... | Water for drinking and culinary purposes obtained from municipal system at Quebec docks is of <i>doubtful quality</i> . |
| Lord Strathcona..... | Quebec..... | ..... | Drinking and culinary water obtained from municipal system at the docks of Quebec. |
| Sorel..... | Sorel..... | ..... | Drinking and culinary water obtained from overboard in the St. Lawrence river <i>en route</i> between Montreal and Sorel; <i>water of doubtful quality supplied to passengers and crew.</i> |
| Nayarit..... | Montreal..... | ..... | This vessel is engaged in passenger and freight service between Montreal and Newfoundland. Drinking and culinary water stored in tank formed in part by ship's hull, and water liable to be contaminated. Water obtained from shore sources at ports of Montreal, Quebec, etc. |
| Empress..... | Montreal..... | ..... | The owners of this vessel supply the passengers and crew with bottled water obtained from Laurentian Water Company. |
| Hitherwood..... | Montreal..... | ..... | Water obtained from overboard in the St. Lawrence river. |
| Terrebonne..... | Montreal..... | ..... | Water obtained from overboard in St. Lawrence river and supplied without treatment to passengers and crew. |
| Laurentia..... | Montreal..... | ..... | Drinking and culinary water obtain from overboard in the St. Lawrence river and stored in barrel on main deck. |
| Soulanges..... | Montreal..... | ..... | Water obtained from overboard in the St. Lawrence river, and supplied to passengers and crew without any treatment. |
| Garden City..... | Montreal..... | ..... | Water obtained from overboard in the St. Lawrence river and supplied without any treatment to passengers and crew. |
| Trois Rivières..... | Montreal..... | ..... | <i>Water obtained from overboard in the St. Lawrence river and supplied without any treatment whatever to passengers and crew.</i> |
| William C. Warren..... | Montreal..... | ..... | Water obtained from overboard in Lake Ontario, separate distribution system. Chlorination practised. |
| Montreal..... | Montreal..... | ..... | Water obtained from hydrant at Victoria pier, Montreal docks, and stored in tanks. |
| Quebec..... | Montreal..... | ..... | Water obtained from hydrant at Victoria pier, Montreal docks, and stored in tanks. |
| Charles Horn..... | Montreal..... | ..... | Water for drinking and culinary purposes obtained from overboard in Great Lakes and distilled before being used. |
| Rapids Prince..... | Sorel..... | ..... | Water obtained from hydrant at Victoria pier, Montreal, and stored in vessel tanks. |
| Rapids Queen..... | Sorel..... | ..... | Water obtained from hydrant at Victoria pier, Montreal, and stored in vessel tanks. |
| Richelieu..... | Montreal..... | ..... | Water obtained from hydrant at Victoria pier, Montreal, and stored in vessel tanks. |
| Saguenay..... | Montreal..... | ..... | Water obtained from hydrant at Victoria pier, Montreal, and stored in vessel tanks. |

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1925—Continued

| Vessels boarded by health officials | Port | Number of analyses of water supply | Remarks |
|-------------------------------------|-------------------------|------------------------------------|---|
| Levis..... | Prescott..... | | Drinking water for passengers and crew obtained from municipal system of Prescott, Ontario. |
| Miss Vandenburg..... | Prescott..... | | Drinking water for passengers and crew obtained from municipal system of Prescott, Ontario. |
| Oatland..... | Kingston..... | | Water obtained from municipal systems of Gananoque, Ontario, and Clayton, N.Y. |
| Frontenac..... | Kingston..... | | |
| Ontario No. 1 and No. 2..... | Cobourg..... | 4 | Water for drinking and culinary purposes purified by passing through Tripure still. |
| Cape Eternity..... | Toronto..... | | Water treated aboard ship by the ultra violet ray system. |
| Sandland..... | Toronto..... | | Separate system for obtaining and storing water for drinking and culinary purposes. |
| Cayuga..... | Toronto..... | 37 | Water supply obtained from hydrant on Toronto's municipal system. Water is also subject to treatment aboard ship with sodium hypochlorite solution. |
| Corona..... | Toronto..... | 18 | Water supply obtained from hydrant on Toronto's municipal system. Water is also subject to treatment aboard ship with sodium hypochlorite solution. |
| Chippewa..... | Toronto..... | 14 | Water supply obtained from hydrant on Toronto's municipal system. Water is also subject to treatment aboard ship with sodium hypochlorite solution. |
| Toronto..... | Toronto and Charlotte.. | | Water supply obtained from hydrant on Toronto's municipal system. Water is also subject to treatment aboard ship with sodium hypochlorite solution. |
| Kingston..... | Toronto and Charlotte.. | 24 | Water supply obtained from hydrant on Toronto's municipal system. Water is also subject to treatment aboard ship with sodium hypochlorite solution. |
| Macassa..... | Toronto..... | 49 | Water tanks are filled at Toronto and Hamilton from dock hydrants supplied from the waterworks systems of these cities. Water is also subject to treatment aboard ship with sodium hypochlorite solution. |
| Wahcondah..... | Toronto..... | 2 | Separate water supply system. This vessel operates from Toronto to Chicago, etc. |
| Turbinia..... | Toronto..... | 19 | Water supply obtained from hydrant on Toronto's waterworks distribution lines at Yonge Street wharf. Water is also subject to treatment with sodium hypochlorite solution. |
| Northumberland..... | Toronto..... | 7 | Water for drinking and culinary purposes obtained from hydrants on municipal system at Toronto. |
| Dalhousie City..... | Toronto..... | 9 | Water for drinking and culinary purposes obtained from hydrants on municipal system at Toronto. |
| Glenellah..... | Port Colborne..... | 3 | Separate drinking water system. Drinking water obtained from overboard in Great Lakes. |
| Ben Maple..... | Port Colborne..... | | Separate drinking water system. Drinking water obtained from overboard in Great Lakes. |
| Americana..... | Crystal Beach..... | | Separate system for drinking and culinary water, which is supplied from certified sources. |
| Bayton..... | Port Colborne..... | 6 | Separate system for drinking and culinary water. Drinking water obtained from overboard in Great Lakes. |
| Berryton..... | Port Colborne..... | 3 | Separate system for drinking and culinary water. Drinking water obtained from overboard in Great Lakes. |
| Royalton..... | Port Colborne..... | 5 | Separate systems for drinking and culinary water. Drinking water obtained from overboard in Great Lakes. |

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1925—Continued

| Vessels Boarded by Health Officials | Port | Number of Analyses of Water Supply | Remarks |
|-------------------------------------|------------------------------------|------------------------------------|--|
| Tiverton..... | Port Colborne..... | 4 | Separate system for drinking and culinary water. Drinking water obtained from overboard in Great Lakes. |
| Mapleton..... | Port Colborne..... | | Separate system for drinking and culinary water. Drinking water obtained from overboard in Great Lakes. |
| Colonial..... | Port Dover..... | | Separate system, water obtained from certified shore sources. |
| Maple Health..... | Port Colborne..... | 1 | Separate system for drinking and culinary water. Chlorination of water supply system practised regularly aboard this steamship. |
| Huronic..... | Sarnia, Fort William, etc..... | 55 | Water supplies held in tanks formed in part by hull of steamship and at times badly contaminated. |
| Hamonic..... | Sarnia, Walkerville..... | 43 | Water supplies carefully handled and subjected to Ultra Violet Ray treatment, always good quality. |
| Noronic..... | Sarnia, Sault Ste. Marie, etc..... | 38 | Water supplies always up to the standard required in the Regulations. |
| Thousand Islander..... | Chatham..... | 1 | Separate water supply system for drinking and culinary water which is obtained from certified shore sources at Detroit. |
| Kamloops..... | Goderich..... | 7 | Separate water supply system for drinking and culinary water. |
| Yorkton..... | Goderich..... | 1 | Separate water supply and distribution system for drinking and culinary water. |
| Kamaris..... | Goderich..... | 7 | Separate water supply system installed this season. |
| Martian..... | Goderich..... | 2 | Separate water supply system being installed in 1925. |
| Winona..... | Goderich..... | 1 | Separate water supply system being installed in 1925. |
| Lambton..... | Goderich..... | 1 | Water for drinking and cooking obtained from overboard by general service pump. |
| Easton..... | Goderich..... | | Separate system for drinking and culinary water. Chlorination regularly practised. |
| John Haggart..... | Owen Sound..... | | Water supplies taken from overboard in Great Lakes using general service pump. |
| Alexandra..... | Owen Sound..... | | Water to be treated by Sodium Hypochlorite solution on board ship. |
| Laura H. Lee..... | Owen Sound..... | 1 | This vessel is engaged in tourist and excursion traffic in the Georgian Bay. Drinking and culinary water is obtained from the municipal system of Owen Sound. |
| Michipicoten..... | Owen Sound..... | 18 | This vessel has the worst typhoid record for the season of 1925. Water was obtained from the Owen Sound waterworks system, but there was an epidemic of Typhoid fever in Owen Sound in 1925. |
| Manitou..... | Owen Sound..... | 19 | Drinking and culinary water is obtained from overboard in lakes Huron and Superior and subjected to chlorination treatment aboard ship. |
| Caribou..... | Owen Sound..... | 25 | Drinking and culinary water is obtained from overboard in lakes Huron and Superior and subjected to chlorination treatment aboard ship. |
| G. R. Gray..... | Owen Sound..... | | Drinking and culinary water is obtained from overboard in lakes Huron and Superior and subjected to chlorination treatment aboard ship. |
| Henry Pedwell..... | Owen Sound..... | 12 | Drinking and culinary water obtained from overboard in Georgian Bay. |
| Midland City..... | Midland..... | 6 | Separate water supply system. This steamship is engaged in tourist traffic in the Georgian Bay. |
| Gleneagles..... | Midland..... | 3 | Separate water supply system for drinking and culinary water. |
| Gleniffer..... | Midland..... | 10 | Separate water supply system for drinking and culinary water. |

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1925—Continued

| Vessels Boarded by Health Officials | Port | Number of Analyses of Water Supply | Remarks |
|--|-----------------------|--|--|
| Emperor..... | Port McNicoll..... | 1 | Separate water supply system for drinking and culinary water. |
| Keewatin..... | Port McNicoll..... | 48 | Separate water supply system for drinking and culinary water which is treated by Ultra Violet system. |
| Assiniboia..... | Port McNicoll..... | 43 | Separate water supply system for drinking and culinary water which is treated by Ultra Violet system. |
| Manitoba..... | Port McNicoll..... | 30 | Separate water supply system for drinking and culinary water. Chlorination practised. |
| Alberta..... | Port McNicoll..... | 2 | Separate water supply system for drinking and culinary water. Chlorination practised. |
| Athabasca..... | Port McNicoll..... | 3 | Separate water supply system for drinking and culinary water. Chlorination practised. |
| Grant Morden..... | Port McNicoll..... | 6 | Drinking and culinary water taken from overboard in Great Lakes and chlorinated. Separate drinking water system. |
| Valcartier..... | Port McNicoll..... | 8 | Separate water supply system for drinking and culinary water. |
| Canadian..... | Port McNicoll..... | 4 | Separate water supply system for drinking and culinary water. |
| Laketon..... | Port McNicoll..... | 6 | Water distributed through this steamship by the general service lines and taken from overboard in the Great Lakes through the common seacock and general service pump. |
| North American..... | Parry Sound..... | 2 | Separate water supply system for drinking and culinary water. Water filtered and passed through Ultra Violet Ray apparatus. |
| "Kearsarge"..... | Depot Harbour..... | | Separate system for drinking and culinary water. Tripure distilling apparatus in use. |
| Arthur Orr..... | Depot Harbour..... | | Separate system for drinking and culinary water. Tripure distilling apparatus in use. |
| Mary Scott..... | Sault Ste. Marie..... | 6 | Separate system for drinking and culinary water which is obtained from certified sources ashore. This passenger steamship operates from Sault Ste. Marie to points on the North Shore of Lake Huron. |
| Puckasaw..... | Sault Ste. Marie..... | 3 | Water obtained from overboard in Lake Superior by general service pump. |
| Gargantau..... | Sault Ste. Marie..... | 3 | Water obtained from overboard in Lake Superior by general service pump. |
| Reliance..... | Sault Ste. Marie..... | 2 | Water obtained from overboard in Lake Superior by general service pump. |
| Terge..... | Port Arthur..... | 1 | Water obtained from overboard in Lake Superior by general service pump. This steamship trades between Great Lakes ports and Europe. |
| Lakefield..... | Port Arthur..... | 1 | Water obtained from overboard in Lake Superior by general service pump. This steamship trades between Great Lakes ports and Europe. |
| America..... | Port Arthur..... | 7 | This steamship operates in passenger service between Duluth, Minn. and Port Arthur, Ontario. |
| Islet Prince..... | Port Arthur..... | 10 | Separate system for drinking and culinary water. |
| Adaline..... | Port Arthur..... | 1 | |
| James V. Crawford..... | Brockville..... | | There is no water available for passengers aboard this steamship which is engaged in ferry service between Brockville, Ontario and Morristown, New York. |
| Frontenac..... | Gananoque..... | | Water for passengers for drinking purposes is obtained from certified sources ashore. |

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1926—*Continued*

| Vessel boarded by health officials | Port | Number of analyses of water supply | Remarks |
|------------------------------------|-----------------------|------------------------------------|---|
| Brockville..... | Kingston..... | | Separate drinking water system. This steamship is engaged in passenger traffic from Kingston through the Thousand Islands and the Bay of Quinte, etc. Water is obtained from certified shore sources. |
| Agawa..... | Sault Ste. Marie..... | 3 | This steamship is supplied with apparatus for distilling the drinking water. |
| W. C. Franz..... | Sault Ste. Marie..... | 4 | This steamship is supplied with apparatus for distilling the drinking water. |
| Frater Taylor..... | Goderich..... | 2 | This steamship is supplied with apparatus for distilling the drinking water. |
| Home Smith..... | Sault Ste. Marie..... | 5 | This steamship is supplied with apparatus for distilling the drinking water. |
| Elmbay..... | Toronto..... | 1 | The steamships of this line are engaged in traffic between Port Colborne and Montreal. |
| Oak Bay..... | Toronto..... | 1 | The steamships of this line are engaged in traffic between Port Colborne and Montreal. |
| Pine Bay..... | Toronto..... | 1 | The steamships of this line are engaged in traffic between Port Colborne and Montreal. |
| Burlin..... | Fort William..... | 1 | This steamship is usually engaged in traffic between Fort William and Port Colborne |
| Oakton..... | Fort William..... | 1 | This steamship is usually engaged in traffic between Fort William and Port Colborne |
| Birchton..... | Port Arthur..... | 1 | This steamship is usually engaged in Upper Lakes traffic. |
| Brookton..... | Port Arthur..... | 2 | This steamship is usually engaged in Upper Lakes traffic. |
| Greypoint..... | Toronto..... | 4 | This steamship trades between Montreal and Fort William. |
| Torhamvan..... | Toronto..... | 3 | This steamship trades between Great Lakes ports and Vancouver, B.C., via the St. Lawrence-Panama canal and Atlantic and Pacific oceans. |
| Iocolite..... | Fort William..... | 3 | Water for drinking and culinary purposes is distributed by separate system. |
| Royalite..... | Fort William..... | 3 | Water for drinking and culinary purposes is distributed by separate system. |
| Imperoyal..... | Fort William..... | 1 | Water for drinking and culinary purposes is distributed by separate system. |
| Aube..... | Fort William..... | 2 | Drinking and culinary water is obtained from overboard in Great Lakes. |
| City of Dover..... | Midland..... | 3 | Drinking and culinary water obtained from hydrant on wharf at Midland. |
| Collier No. 1..... | Fort William..... | 1 | Most modern coal carrier of the Canadian Great Lakes fleet. |
| City of Hamilton..... | Toronto..... | 11 | Separate water system for drinking and culinary purposes. |
| City of Montreal..... | Toronto..... | 5 | Separate water system for drinking and culinary purposes. |
| City of Ottawa..... | Toronto..... | 1 | Separate water system for drinking and culinary purposes. |
| E. B. Osler..... | Fort William..... | 3 | Separate water system for drinking and culinary purposes. |
| Westmount..... | Port Arthur..... | 6 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Edmonton..... | Fort William..... | 3 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Collingwood..... | Fort William..... | 6 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Beaverton..... | Fort William..... | 2 | Drinking and culinary water obtained from overboard in Great Lakes. |
| A. E. McKinstry..... | Sault Ste. Marie..... | 1 | This steamship is supplied with an entirely separate system for water service. |
| Midland King..... | Goderich..... | 6 | This steamship is supplied with an entirely separate system for water service. |

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1926—Continued

| Vessels boarded by health officials | Port | Number of analyses of water supply | Remarks |
|-------------------------------------|-----------------------|------------------------------------|--|
| Midland Prince..... | Sault Ste. Marie..... | 8 | Drinking and culinary water obtained from overboard in the Great Lakes system. |
| W. D. Matthews..... | Port Arthur..... | 3 | Drinking and culinary water obtained from overboard in the Great Lakes system. |
| J. H. G. Hagarty..... | Port McNicoll..... | 6 | Drinking and culinary water obtained from overboard in the Great Lakes System. |
| Kenora..... | Fort William..... | 3 | Drinking and culinary water obtained from overboard in the Great Lakes system. |
| Lethbridge..... | Fort William..... | 7 | Drinking and culinary water obtained from overboard in the Great Lakes system. |
| Glencairn..... | Midland..... | 3 | Separate system for drinking and culinary water. |
| Glenfinnan..... | Midland..... | 7 | Separate system for drinking and culinary water. |
| Glenshee..... | Midland..... | 2 | Separate system for drinking and culinary water. |
| Glenelg..... | Midland..... | 2 | Separate system for drinking and culinary water. |
| Glenrig..... | Midland..... | 2 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Glenlivet..... | Midland..... | 6 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Glenisla..... | Midland..... | 7 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Glensannox..... | Midland..... | 5 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Gleniffer..... | Midland..... | 10 | Entirely separate system for drinking and culinary water. |
| Gleneagles..... | Midland..... | 3 | Entirely separate system for drinking and culinary water. |
| Northton..... | Goderich..... | 2 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Malton..... | Fort William..... | 2 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Mathewston..... | Fort William..... | 7 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Green River..... | Port Arthur..... | 1 | Drinking and culinary water obtained from overboard in Great Lakes. |
| A. F. Bowman..... | Port Arthur..... | 5 | Drinking and culinary water obtained from certified shore sources. |
| John C. Howard..... | Sault Ste. Marie..... | 1 | Drinking and culinary water obtained from overboard in Great Lakes. |
| Frank Augsburg..... | Sault Ste. Marie..... | 1 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Glenburnie..... | Midland..... | 2 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Glenmavis..... | Port Arthur..... | 2 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Glenbuckie..... | Port Arthur..... | 3 | Drinking and culinary water obtained from overboard in the Great Lakes. |
| Norman M. Patterson... | Fort William..... | 1 | Drinking and culinary water obtained overboard in Great Lakes. |
| Donald E. McKay..... | Fort William..... | 1 | Drinking and culinary water obtained overboard in Great Lakes. |
| Thomas J. Drummond... | Fort William..... | 6 | Separate system for drinking and culinary water. |
| A. J. McKee..... | Fort William..... | 10 | Separate system for drinking and culinary water. |
| Mapleboro..... | Toronto..... | 12 | Water obtained overboard in the Great Lakes for drinking and cooking. |
| Maplebranch..... | Toronto..... | 5 | Water obtained overboard in the Great Lakes for drinking and cooking. |
| Maplebrook..... | Fort William..... | 2 | Water obtained overboard in the Great Lakes for drinking and cooking. |
| Maplecourt..... | Port Arthur..... | 2 | Water obtained overboard in the Great Lakes for drinking and cooking. |
| Lenan..... | Owen Sound..... | 1 | Water obtained overboard in the Great Lakes for drinking and cooking. |

TABLE No. 1—SUMMARY OF SEASON'S WORK, 1926—*Concluded*

| Vessel boarded by health officers | Port | Number of analyses of water supply | Remarks |
|-----------------------------------|-----------------------|------------------------------------|--|
| James Laughlin..... | Port Arthur..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| William Livingstone..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| Monroe Smith..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| Hubert Smith..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| Robert Wallace..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| R. L. Theyer..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| Jolly Inez..... | Sault Ste. Marie..... | 1 | Water for drinking and culinary purposes obtained overboard in Great Lakes. |
| Turret Cape..... | Fort William..... | 1 | Water for drinking and culinary purposes obtained overboard in Great Lakes. |
| Marten Kerr..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| William Fitch..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| Cambria..... | Fort William..... | 1 | Water for drinking and culinary purposes is distilled before being used. |
| Cape Trinity..... | Toronto..... | 18 | Water for drinking and culinary purposes is obtained from certified shore sources. |

TABLE No. 2—TYPHOID STATISTICS

TYPHOID FEVER CASES REPORTED

| Province | Year | Totals | | Increases | | Remarks |
|------------------|------------------------|------------|----------|-----------|--------|--|
| | | Cases | Deaths | Cases | Deaths | |
| Nova Scotia..... | 1924..... | <i>123</i> | 24 | 10 | | |
| | 1923..... | 113 | 33 | | | |
| New Brunswick.. | 1924..... | 233 | 18 | | | |
| | 1923..... | 402 | 28 | | | |
| Quebec..... | July-June, 1923-1924.. | 893 | | 60 | | Epidemic result of impure water at St. Jerome. |
| Ontario..... | 1922-1923..... | 833 | 326 | | | |
| | 1924..... | 833 | 76 | | | Port Colborne epidemic. |
| | 1923..... | 1,665 | 212 | 1,089 | 85 | Cochrane epidemic. |
| | 1922..... | 576 | 127 | | | |
| Manitoba..... | 1924..... | 81 | 20 | | | |
| | 1923..... | 110 | 24 | | | |
| | 1920..... | 192 | | | | |
| Winnipeg City... | 1924..... | <i>36</i> | <i>6</i> | 10 | | Report for Winnipeg states 15 persons contracted typhoid while travelling outside of city in 1923. |
| | 1923..... | 26 | 5 | | | |
| Saskatchewan... | 1923..... | 151 | 66 | | | |
| | 1922..... | 249 | 71 | 66 | | Increase over 1921. |
| Alberta..... | 1923..... | 155 | 36 | | | |
| | 1922..... | 169 | 50 | | | |
| British Columbia | 1924..... | <i>109</i> | | 30 | | |
| | 1923..... | 79 | | | | |

N.B.—*Italic figures indicate an increase in the total number of cases of typhoid fever.*

TABLE No. 3—TYPHOID FEVER IN PORTS IN QUEBEC PROVINCE

The report of the Provincial Bureau of Health of Quebec shows that, during the period July, 1923, to June, 1924, inclusive, there were the following number of cases of typhoid fever treated at inland ports, viz.:

Montreal—139—a decrease of 30 from the previous year.

Three Rivers—10—a decrease of 2 from the previous year.

Quebec—14—an increase of 9 over the previous year.

It is also a matter of record that four persons were treated in Montreal for typhoid fever, who prior to their sickness were either employed or were passengers on steamships engaged in traffic on the inland waters of Canada. The record for the previous twelve months was a total of four such cases.

The table of typhoid fever death rates per 100,000 of population, given below would appear to indicate the necessity for more attention being given to work of a preventive nature in the province of Quebec.

TYPHOID FEVER DEATH RATES PER 100,000 OF POPULATION

| Place | 1923 | 1922 | 1921 | 1920 | 1919 | 1918 | 1917 | 1916 | 1915 | 1914 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|
| Quebec Province..... | 13.5 | 13.5 | 16.2 | 22.0 | 16.5 | 17.0 | 29.1 | 24.2 | 21.4 | 19.9 |
| Ontario Province..... | 7.9 | 6.0 | 7.3 | 7.0 | 5.2 | 7.5 | 8.4 | 12.0 | 10.7 | 13.5 |
| United States of America..... | 6.3 | 7.5 | 9.0 | 7.8 | 9.2 | 12.5 | 13.4 | 13.3 | 12.4 | 15.4 |

TABLE No. 4—CASES OF TYPHOID FEVER REPORTED FROM GREAT LAKES PORTS

Report of Provincial Board of Health

| Municipality | Year | Number of | | Remarks, Increase, etc. |
|---------------------|------|-----------|--------|---|
| | | Cases | Deaths | |
| Montreal..... | 1924 | 139 | | |
| | 1923 | 169 | 47 | 4 directly from steamships. |
| | 1922 | 271 | 63 | |
| | 1921 | 187 | 62 | |
| Iroquois..... | 1924 | 8 | | Due to use of the canal water. |
| | 1923 | 8 | | |
| Prescott..... | 1922 | | | 3 directly from steamships. |
| | 1921 | | | |
| Kingston..... | 1924 | 6 | | All from outside of Kingston. |
| | 1923 | 9 | 2 | 1 directly from steamships, 6 originated outside of Kingston. |
| | 1922 | a few | | Report of Dr. Williamson. |
| | 1921 | 6 | | Report of Dr. Williamson. |
| Port Hope..... | 1922 | 1 | | |
| | 1921 | 6 | | |
| Oshawa..... | 1925 | 1 | | |
| | 1923 | 8 | | |
| | 1922 | 6 | | |
| Toronto..... | 1925 | 43 | 9 | 21 contracted infection outside of city. |
| | 1924 | 39 | | 29 originated outside of city, 2 directly from steamships. |
| | 1923 | 85 | | 66 originated outside of city. |
| Long Branch..... | 1924 | 13 | | |
| Oakville..... | 1923 | 1 | | |
| Hamilton..... | 1925 | 18 | | 10 were infected outside of the city. |
| | 1924 | 13 | | 6 from outside of city. |
| | 1923 | 13 | 4 | 9 cases infected outside of city. |
| | 1922 | 21 | 1 | |
| St. Catharines..... | 1921 | 21 | 3 | |
| | 1923 | 13 | 2 | 1 from steamships, increase of 11. |
| | 1922 | 2 | 1 | |
| Welland..... | 1921 | 13 | | All contracted outside of city. |
| | 1925 | 20 | 5 | 8 originated outside of Welland. |
| | 1924 | 19 | | 2 directly from steamships. |
| | 1923 | 10 | | 3 directly from steamships. |
| | 1922 | 14 | | 3 directly from steamships. |
| | 1921 | 4 | | |

TABLE No. 4—CASES OF TYPHOID FEVER REPORTED FROM GREAT LAKES PORTS—*Concluded**Report of Provincial Board of Health*

| Municipality | Year | Number of | | Remarks, Increase, etc. |
|-----------------------|------|-----------|--------|--|
| | | Cases | Deaths | |
| Chippawa..... | 1923 | 10 | 2 | |
| Chatham..... | 1924 | 1 | ..... | 1 case from lake steamship. |
| | 1923 | 1 | | |
| | 1922 | 11 | 4 | |
| London..... | 1925 | 5 | | |
| Windsor..... | 1924 | 12 | ..... | 1 directly from steamships. |
| | 1923 | 24 | ..... | 3 directly from steamships. |
| | 1922 | 15 | ..... | 3 directly from steamships. |
| | 1921 | ..... | ..... | 1 from steamship. |
| Sarnia..... | 1925 | 1 | ..... | 1 case from steamship "Sarnolite". |
| | 1924 | 10 | 2 | None. |
| | 1923 | 2 | ..... | Both being employees of vessel companies. |
| | 1922 | 5 | ..... | 4 directly from steamships. |
| | 1921 | 4 | ..... | 3 directly from steamships. |
| Goderich..... | 1923 | 5 | ..... | 1 directly from steamships. |
| Collingwood..... | 1924 | 0 | ..... | None from steamships. |
| | 1923 | 1 | ..... | 1 directly from vessels. |
| | 1922 | 2 | ..... | 2 from steamships. |
| Owen Sound..... | 1925 | 28 | 3 | An epidemic of Typhoid Fever in the city. |
| | 1924 | 8 | ..... | 6 from steamships. |
| Midland..... | 1924 | 2 | ..... | Both from Great Lakes steamships. |
| | 1923 | 11 | ..... | Increase 10. 6 directly from steamships. |
| | 1922 | 1 | ..... | 1 from steamships. |
| | 1921 | 3 | ..... | 2 directly from steamships. |
| Parry Sound..... | 1924 | 2 | ..... | These two cases infected outside of Parry Sound. |
| | 1923 | 13 | ..... | This is for Parry Sound District. |
| | 1922 | 14 | ..... | Increase 3. |
| | 1921 | 11 | 1 | Very bad record. See report of Dr. E. George. |
| Kincardine..... | 1925 | 1 | | |
| Depot Harbour..... | 1924 | 1 | | |
| | 1923 | a few | | |
| Sault Ste. Marie..... | 1924 | 1 | ..... | None from steamships, decrease of 4. |
| | 1923 | 5 | ..... | 2 directly from steamships. |
| | 1922 | 6 | ..... | Decrease of 3. 2 from steamships. |
| | 1921 | 3 | ..... | 1 from steamships. |
| Port Arthur..... | 1923 | 7 | ..... | Increase 6. 4 originated outside of Port Arthur. |
| | 1922 | 1 | | |
| | 1921 | 1 | 1 | |
| Fort William..... | 1924 | 3 | ..... | 3 directly from steamships. |
| | 1923 | 27 | 1 | Increase 6. 11 directly from steamships. |
| | 1922 | 21 | 1 | Increase 11. Two directly from steamships. |
| | 1921 | 10 | 1 | 3 directly from steamships. |

TABLE No. 5

Total number of cases of *Typhoid Fever* reported from Great Lakes Vessels Sailing from Canadian Ports in 1924 was 31. There were no deaths reported.

Up to November 27, 1924, reports of the United States Public Health Service give the number of cases of *Typhoid Fever* from vessels of *United States Register* as 8.

The number of cases of *Typhoid Fever* reported as originating aboard steamships of Canadian Register is still over three times as great as the number reported as originating aboard vessels of *United States register*, although the total number of vessels of *United States register* is three times as large as the total of the *Canadian Fleet*.

TYPHOID FEVER PATIENTS FROM GREAT LAKES STEAMSHIPS

| Steamship | Owners | Number of cases reported | From where reported | Date | Remarks—Patient's Name, etc. |
|------------------------------------|---|--------------------------|--|----------------------|---|
| Mapledawn..... | Canada Steamship Lines Limited. | 1 | McKellar Hospital, Fort William (Dr. G. L. Sparks). | May 20, 1924 | Seaman Dalton Keiling. |
| Alberta..... | Canadian Pacific Great Lakes Steamships. | 1 & 5 contacts | Dr. G. M. Fraser, Owen Sound. | June 23, 1924 | Arthur Blair spread typhoid fever to at least five other members of his household. (See also special report by Dr. Fraser). |
| Canadian Warrior.... | Canadian Government Merchant Marine. | 1 | Dr. H. C. Cruickshank, Toronto. | July 18, 1924 | John McGregor, deck-hand was landed at Port Colborne July 11, dangerously ill. |
| Drummond..... | N. M. Paterson & Co. Ltd. | 1 | Dr. G. L. Sparks, Fort William. | July 22, 1924 | Mr. T. W. Nicolls taken off steamship Drummond, at Fort William, July 22nd. |
| Athabasca..... | Canadian Pacific Great Lakes Steamships. | 1 | Dr. G. M. Fraser, Owen Sound. | July 22, 1924 | Treated at Midland hospital. |
| Detroit III (passenger steamship). | Detroit and Cleveland Navigation Company | 1 | Dr. F. Adams, Windsor | July 31, 1924 | Mrs. Irene Quinlan developed typhoid after trip on this steamship. Reported by U.S.P. H.S. that water supply on this vessel shows contamination although W. & T. apparatus installed. |
| Detroit Shipbuilding Yards. | Detroit Shipbuilding Co | 1 | Dr. F. Adams, Windsor. | April 17, | William Galloway of Windsor, Ont. |
| City of Hamilton.... | Canada Steamship Lines Limited. | 1 | Dr. J. G. Copeland, Montreal General Hospital. | July 30, 1924 | Edward Beer, admitted to hospital July 28. |
| Alberta..... | Canadian Pacific Great Lakes Steamships. | 1 | W. C. Millar, Provincial Sanitary Inspector, Fort William. | Aug. 2, 1924 | Second Mate taken ashore at Port McNicoll as typhoid case. |
| Douglas..... | Eastern Steamship Co. Limited. | 1 | Dr. W. G. Reeve, Welland, Ont. | Aug. 30, 1924 | Gamme of Midland, Ont., discharged on October 4th. |
| Not given | Not stated..... | 2 | Toronto Western Hospital. | Up to Oct. 13, 1924. | |
| Beechbay..... | Tree Line Ltd..... | 1 | Montreal General Hospital. | June 2, 1924 | R. Gibson. |
| Glenbuckie..... | Great Lakes Transportation Company Ltd. | 1 | Montreal General Hospital. | Oct. 15, 1924 | James White other members of crew also. |
| Glenbuckie..... | " | 1 | " | Oct. 18, 1924 | W. Goodwin sick at this time. |
| Glenbuckie..... | Great Lakes Transportation Company Ltd. | 1 | Welland County Hospital. | Oct. 23, 1924 | Edward Woods of Craigville, Ont. |
| Not given | Not stated..... | 1 | Welland County Hospital. | Oct. 30, 1924 | Alfred Gamme. |
| Canadian Sailor.... | Canadian Government Merchant Marine. | 1 | Fort William..... | Nov. 22, 1924 | Not given. |
| Not given..... | Not stated..... | 1 | St. Joseph's Hospital, Chatham, Ont. | July 27, 1924 | Angus McLennan, reported by Dr. T. L. McRitchie, M.O.H. |
| Ashtabula..... | Pennsylvania and Ontario Transport Company. | 1 | Ashtabula, Ohio..... | Nov. 27, 1924 | Wm. Rockwell, fireman. |
| Alberta..... | Canadian Pacific Great Lakes Steamships. | 1 | St. Andrew's Hospital, Midland, Ont. | " 1924 | Charles Patterson employed on SS. "Alberta." |
| Glenarm..... | George Hall Navigation Company. | 1 | St. Andrew's Hospital, Midland, Ont. | " 1924 | J. McTague, employed on SS. "Glenarm." |
| Dredges..... | C. S. Boone Construction Company. | 2 | Port Colborne, Ont..... | " 1924 | Not given. |
| Mikula..... | Department of Marine.. | 1 | Hotel Dieu, Quebec.... | April 15, 1924 | P. Bernier, member of crew, case diagnosed as enteritis. |
| Lady Grey..... | Department of Marine.. | 1 | Sorel Hospital..... | May 4, 1924 | N. Cournoyer, member of crew. |

TABLE No. 6—CANADIAN STEAMSHIPS WITH TYPHOID FEVER RECORDS

| Vessel's Name | Owner | Year | Remarks |
|------------------------------|--|-------------|--|
| Mapleboro..... | Canada Steamship Lines..... | 1923 | Patient treated at Midland. |
| Maplebrook..... | Canada Steamship Lines..... | 1921 | Patient treated at Sault Ste. Marie. |
| Mapledawn..... | Canada Steamship Lines..... | 1924 | Patient treated at Fort William. |
| E. B. Osler..... | Canada Steamship Lines..... | 1921 | Patient treated at Fort William. |
| Westmount..... | Canada Steamship Lines..... | 1922 | Patient treated at Montreal General Hospital. |
| City of Hamilton..... | Canada Steamship Lines..... | 1924 | Patient treated at Montreal General Hospital. |
| Winona..... | Canada Steamship Lines..... | 1923 | Patient treated at Sydney. |
| Cape Trinity..... | Canada Steamship Lines..... | 1922 | Purser died from typhoid fever. |
| Cape Eternity..... | Canada Steamship Lines..... | 1925 | Patient treated on return to United States. |
| Rapids Queen..... | Canada Steamship Lines..... | | |
| Badger..... | Ontario Gravel Freighting Company..... | 1923 | Patient treated at Windsor. |
| Peter Pan..... | Ontario Gravel Freighting Company..... | 1922 | Patient treated at Sarnia Hospital. |
| Keystate..... | Keystone Transports Co..... | 1923 | Patient treated in Montreal Hospital. |
| Government Dredge No. 1..... | Department of Public Works..... | 1923 | Patient treated at Windsor. |
| Laketon..... | Mathews Steamship Co..... | 1922 | Patient treated at Chicago. |
| Berryton..... | Mathews Steamship Co..... | 1923 | Entire crew treated at Fort William. |
| Charles Lyon..... | Prescott-Ogdensburgh Ferry..... | 1922-23 | Three patients and one death. |
| Glenlivet..... | Great Lakes Transportation Co..... | 1923 | Patient treated at Fort William. |
| Glencairn..... | Great Lakes Transportation Co..... | 1921 | Patient treated at Fort William. |
| Glenbuckie..... | George Hall Navigation Company..... | 1924 | Patients treated at Montreal and Welland hospitals. |
| Glenarm..... | George Hall Navigation Company..... | 1924 | Patient treated at Midland hospital. |
| Assiniboia..... | Canadian Pacific Steamships..... | 1922 & 1923 | Patients treated at Fort William. |
| Alberta..... | Canadian Pacific Steamships..... | 1924 | Patients treated at Owen Sound and Midland. |
| Athabasca..... | Canadian Pacific Steamships..... | 1924 | Patient treated at Midland hospital. |
| Manitoba..... | Canadian Pacific Steamships..... | 1923 | Patient treated at Port McNicoll. |
| Ashtabula..... | Pennsylvania and Ontario Transport Co..... | 1923 & 1924 | Patients treated at Ashtabula. |
| J. A. McKee..... | N. M. Patterson Co., Limited..... | 1923 | Patient treated at Midland hospital. |
| T. J. Drummond..... | N. M. Patterson Co. Limited..... | 1923 & 1924 | Patients treated at Fort William. |
| Franz..... | Algoma Central Navigation Co..... | 1923 | Mate of vessel treated at Midland hospital. |
| Royalite..... | Imperial Oil Co..... | 1921 | Patient treated at Montreal. |
| Sarnolite..... | Imperial Oil Co..... | 1923 & 1925 | Patients treated at Sarnia and Montreal. |
| Noronic..... | Northern Navigation Co..... | 1920-21-22 | Patients treated at Sarnia and Fort William. |
| Hamonic..... | Northern Navigation Co..... | 1923 | Patient treated at Fort William. |
| Canadian Beaver..... | Canadian Government Merchant Marine..... | 1923 | Patient treated at Montreal. |
| Canadian Pathfinder..... | Canadian Government Merchant Marine..... | 1923 | Patient treated at Midland hospital. |
| Canadian Engineer..... | Canadian Government Merchant Marine..... | 1923 | Patients treated at Fort William, Chicago and Windsor. (deaths). |
| Canadian Warrior..... | Canadian Government Merchant Marine..... | 1924 | Patient treated at Chicago. |
| Canadian Sailor..... | Canadian Government Merchant Marine..... | 1923 & 1924 | Patients treated at Fort William hospital. |
| John J. Rammacher..... | Eastern Steamships Co..... | 1925 | Patient treated at Wiarton. |
| Douglas..... | Eastern Steamships Co..... | 1924 | Patient treated at Welland hospital. |

TABLE No. 6—CANADIAN STEAMSHIPS WITH TYPHOID FEVER RECORDS—*Continued*

| Vessel's Name | Owner | Year | Remarks |
|---------------------------------|--|------|--|
| Beechbay..... | Tree Line Limited..... | 1924 | Patient treated at Montreal general hospital. |
| Dredges..... | C. S. Boone Co. Limited..... | 1924 | Patients treated at Port Colborne. |
| Marquette & Bessemer No. 2..... | Marquette and Bessemer Navigation Company..... | 1925 | Patient treated at Ashtabula. |
| Michipicoten..... | Owen Sound Transportation Company..... | 1925 | Patients treated at Owen Sound and Sault Ste. Marie hospitals. |
| Mikula..... | Department of Marine..... | 1924 | P. Bernier, member of crew, case diagnosed as Enteritis. |
| Lady Grey..... | Department of Marine..... | 1924 | N. Cournoyer, member of crew. |

TABLE No. 7—TOTAL PASSENGERS CARRIED

| Steamship Company | Steamship | Year | Total number of passengers carried | Remarks |
|---|--|--------------|------------------------------------|--|
| Montreal and Cornwall Navigation Company..... | Brittanic..... | 1925 | 421 | This steamship is operated between Montreal and Cornwall, Ont. |
| Thousand Island Navigation Company... | Mississquoi, Frontenac..... | 1925 | 35,200 | These steamships are operated between Gananoque, Ont., and Clayton, N.Y. |
| Rockport Navigation Company Limited. | Waubic..... | 1925 | 27,500 | An increase of 6,105 over the figures in last year's report. This steamship operates between Kingston, Ontario, and Cape Vincent, New York, and to some extent through the Thousand Islands of the St. Lawrence river. |
| Kingston Navigation Company Limited.. | Brockville..... | 1925 | 18,544 | An increase of 5,110. This steamship is operated from Kingston to points in and adjacent to the Bay of Quinte. |
| Wolfe Island Ferry Service..... | Wolfe Islander..... | 1925 | 20,459 | This steamship operates between Kingston and Wolfe Island. |
| Niagara, St. Catharines and Toronto Navigation Company..... | Dalhousie City, } Northumberland } | 1925 1925 | 134,466 121,022 | An increase of 20,879. These steamships are operated between Toronto and Port Dalhousie on Lake Ontario. |
| Buffalo and Crystal Beach Corporation.. | Americana..... } Canadiana..... } | 1925 1925 | 524,350 | The total number carried by these two steamships from Buffalo to Crystal Beach, Ontario, throughout the season of 1925. Increase of 100,720 over the previous season. |
| Western Reserve Navigation..... | City of St. Ignace.. | 1925 | 7,048 | 7,048 persons and 600 automobiles were landed at Port Stanley, Ontario, by this steamship from United States ports. |
| Windsor and Pelee Island Steamship Company. | Pelee..... | 1925 | 8,406 | This is an increase of 3,527 over last year's report. The S.S. "Pelee" operates between Kingsville, Pelee Island, and Sandusky, Ohio. |
| Frank E. Kirby Steamship Company.... | Frank E. Kirby.... | 1925 | 24,307 | Total number of passengers carried both into and out of Kingsville, Ontario. |
| Dominion Transportation Company..... | Caribou..... | 1925 | 2,025 | These steamships carry tourists and supplies from Owen Sound to points in the Georgian Bay, Sault Ste. Marie, Michipicoten Island, etc. |
| John Tackaberry..... | Henry Pedwell.... | 1925 | 487 | This steamship carries freight and passengers to various minor ports on the Georgian Bay. Increase of 82 passengers over the previous report. |
| Georgian Bay Tourist Co..... | Midland City..... | 1925 | 16,000 | This steamship is engaged in tourist traffic, stopping at various points between Midland and Parry Sound on the Georgian Bay. Increase of 6,000. |
| Canadian Pacific Great Lakes Steamships | Assiniboia..... | 1925 | 5,330 | A relatively small number of passengers are also carried on the steamships "Alberta" and "Athabasca" towards the end of the season. |
| | Keewatin..... | 1925 | 4,934 | |
| | Manitoba..... | 1925 | 1,622 | |
| Alexandra Steamship Company..... | Alexandra..... | 1925 | 354 | This steamship is engaged in traffic in the vicinity of Little Current. |
| Northern Navigation Company..... | Noronic..... } Hamonic..... } Huron..... } | 1925 | 31,505 | An increase over 1924 of 115. These steamships are operated from Windsor-Detroit to Port Arthur and Duluth, passing through lakes St. Clair, Huron and Superior. |

DEPARTMENT OF HEALTH

TABLE No. 7—TOTAL NUMBER OF PASSENGERS CARRIED—*Concluded*

| Steamship Company | Steamship | Year | Total Number of passengers carried | Remarks |
|--|----------------------|------|------------------------------------|---|
| International Transit Co..... | Algoma..... | 1925 | 321,366 | Ferry service across the Ste. Marie river. |
| Algoma Tourist Company..... | Mary Scott..... | 1925 | 1,893 | This steamship is engaged in traffic in the North Channel of the Georgian Bay |
| Maid of the Mist Navigation Co..... | Maid of the Mist.... | 1925 | 89,651 | Tourists and sightseers in the Niagara river gorge. |
| Ontario Car Ferry Company, Limited.... | Ontario No. 1..... | 1925 | 50,127 | These steamships are operated throughout the whole of the year between the ports of Cobourg, Ontario, and Charlotte, N.Y. Increase of 13,710 over last year. |
| | Ontario No. 2..... | 1925 | 23,808 | |
| Niagara Ferry and Transportation Co..... | Orleans..... | 1925 | 138,442 | The total number of passengers carried by the various steamships of this company from Buffalo, N.Y., into Canada throughout the season. |
| | Jamaica..... | 1925 | 500,169 | |
| | Newtown..... | 1925 | 299,119 | |
| | Bedell..... | 1925 | 144,447 | |
| | Chicora..... | 1925 | 175,912 | |
| Prescott and Ogdensburg Ferry Company | Levis..... | 1925 | 32,676 | This steamship company operates the International ferry service between Prescott, Ontario, and Ogdensburg, New York. This line also shows an increase in the number of passengers carried of 14,060 for 1925. |
| | Miss Vandenburg.... | 1925 | 266,729 | |

TABLE No. 8—WATER SUPPLIES AT GREAT LAKE PORTS

| Port | Method of Disinfection of Water Supply | Is Water Supplied of Approved Quality | Remarks |
|--------------------------|---|---------------------------------------|---|
| Montreal..... | Chlorination, filtration..... | Approved..... | Hydrants at Victoria pier. |
| Cornwall..... | Liquid chlorine equipment..... | Approved..... | |
| Prescott..... | Chloride of lime added to water..... | Approved..... | Not to Ontario standard. |
| Brockville..... | Liquid chlorine added to water..... | Approved..... | Water taken from lake Ontario. |
| Gananoque..... | | Not on approved list | Water taken from the St. Lawrence river. |
| Kingston..... | Liquid chlorinating plant..... | Approved..... | |
| Trenton..... | No treatment attempted..... | Approved..... | Water from springs. |
| Belleville..... | Grav ty mechanical and chlorination plant..... | Approved..... | |
| Picton..... | No disinfection practised..... | Not approved..... | Waterworks only supplies water for fire protection, street flushing, etc. |
| Cobourg..... | Mechanical pressure filters..... | Approved..... | Water from Lake Ontario. |
| Toronto..... | Chlorination and sand filtration..... | Approved..... | Water from Lake Ontario. |
| Port Credit..... | Slow sand filtration..... | Approved..... | Water from Lake Ontario... |
| Oakville..... | Gravity mechanical..... | Approved..... | Water from Lake Ontario. |
| Hamilton..... | | Approved..... | |
| Grimsby..... | Mechanical pressure filters..... | Approved..... | Apparatus installed 1923. |
| Niagara on the Lake..... | Mechanical filter and chloride of lime equipment..... | Approved..... | Water from lower Niagara river. |
| Port Dalhousie..... | | Approved..... | |
| Merritton..... | Liquid chlorine equipment..... | Approved..... | Water from Welland Canal. |
| St. Catharines..... | Gravity mechanical..... | Approved..... | Water from Welland Canal. New filtration plant under construction. |
| Thorold..... | Liquid chlorine equipment..... | Approved..... | New works in progress. Water from Welland canal. |
| Welland..... | Liquid chlorine equipment..... | Approved..... | New filtration plant under construction. |
| Fort Erie..... | Liquid chlorine equipment..... | Approved..... | Constructed in 1924. |
| Bridgeburg..... | Liquid chlorine equipment..... | Approved..... | |
| Port Colborne..... | Mechanical pressure filters and W. and T. chlorination..... | Approved..... | |
| Crystal Beach..... | Filtration plant..... | Not approved..... | Constructed in 1925. |
| Port Maitland..... | | Not approved..... | Water from lake Erie. |
| Port Dover..... | | Not yet approved... | New water system installed 1923. |

TABLE No. 8—WATER SUPPLIES AT GREAT LAKE PORTS—*Concluded*

| Port | Method of Disinfection of Water Supply | Is Water Supplied of Approved Quality | Remarks |
|-----------------------|--|---------------------------------------|---|
| Port Burwell..... | — | Not approved..... | |
| Port Stanley..... | Chloride of lime equipment..... | Approved..... | Water from lake Erie. |
| Erieau..... | — | — | No water supply system. |
| Kingsville..... | Pressure filters..... | Not approved..... | No attempt at chlorination. |
| Amherstburg..... | Liquid chlorine equipment..... | Approved..... | Water from lake Erie. Filtered water from Brunner Mond plant. |
| Windsor..... | Liquid chlorine..... | Approved..... | Water from Detroit river. |
| Walkerville..... | — | Approved..... | New filtration scheme under construction for Border Cities. |
| Chatham..... | Mechanical pressure filters and liquid chlorine equipment..... | Approved..... | Water from Thames river. |
| Wallaceburg..... | Mechanical pressure filters and chloride of lime equipment..... | Approved..... | Water from lower St. Clair river. |
| Courtright..... | Liquid chlorine equipment..... | Approved..... | |
| Sarnia..... | Liquid chlorine..... | Approved..... | No reservoir water pumped direct to mains from lower lake Huron. |
| Point Edward..... | — | Approved..... | Draws water supply from Sarnia lines. |
| Goderich..... | Chlorination (W. and T.)..... Intake pipe extended beyond breakwater in 1924. | Approved..... | Water from Lake Huron. |
| Owen Sound..... | Slow sand filter and chlorine equipment..... | Not yet approved.. | Water from Sydenham river and springs. |
| Meaford..... | Liquid chlorine equipment..... | Approved..... | Short intake pipe draws water from Georgian Bay. |
| Collingwood..... | Liquid chlorine equipment..... | Approved..... | Water taken from Georgian Bay. |
| Port McNicoll..... | — | — | Headquarters of C.P.R. fleet. No municipal system. |
| Midland..... | Filtered and chlorinated..... | Approved..... | Water from springs—is filtered—in passing through settling basins. |
| Parry Sound..... | Liquid chlorine equipment..... | Approved..... | No pipe line or hydrants near wharf—short intake draws water from Georgian Bay. |
| Thessalon..... | Liquid chlorine equipment..... | Approved..... | |
| Sault Ste. Marie..... | Liquid chlorine equipment..... | Approved..... | Intake obtains water from flume of Superior Paper Co. Limited. Pipe lines extend down to docks for supply to vessels. |
| Port Arthur..... | Liquid chlorine equipment..... | Approved..... | Water from lake Superior. |
| Fort William..... | No treatment..... | Approved..... | Water from Loch Lomond. |

DEPARTMENT OF HEALTH

TABLE No. 9—VESSEL WATER SUPPLIES

| Name of Vessel | Type | Number of Persons living aboard vessel | | | Capacity of Water Tanks, Drinking and Culinary | Capacity Per Capita in Gallons |
|------------------------|------------------------|--|------------|-------|--|--------------------------------|
| | | Crew | Passengers | Total | Gallons | |
| Americana..... | Passenger... | 51 | 3,500 | 3,551 | 1,780 | 0.5 drinking and culinary. |
| Assiniboia..... | " .. | 125 | 250 | 375 | 33,000 | 88 all purposes. |
| Bon Ami..... | " .. | 9 | 245 | 254 | 210 | 0.8 drinking and culinary. |
| Brittanic..... | " .. | 19 | 200 | 219 | 108 | 0.5 " " |
| Cape Trinity..... | " .. | 80 | 400 | 480 | 2,356 | 4.4 " " |
| Cape Diamond..... | " .. | 75 | 300 | 375 | 5,864 | 15 all purposes. |
| Cape Eternity..... | " .. | 100 | 300 | 400 | 6,074 | 15 drinking and culinary. |
| Cayuga..... | " .. | 50 | 2,160 | 2,210 | 1,340 | 0.6 " " |
| Canadiana..... | " .. | 51 | 3,500 | 3,551 | 1,780 | 0.5 " " |
| Caribou..... | " .. | 25 | 135 | 160 | 160 | 1 " " |
| Chippewa..... | " .. | 50 | 2,000 | 2,050 | 1,560 | 0.7 " " |
| City of Dover..... | " .. | 5 | 419 | 424 | 15 | " " |
| Corona..... | " .. | 35 | 1,456 | 1,491 | 1,879 | 1.2 " " |
| Dalhousie City..... | " .. | 26 | 1,094 | 1,120 | 2,475 | 2 all purposes. |
| Frank Kirby..... | " .. | 31 | 95 | 126 | 600 | 4.8 drinking and culinary. |
| Harmonic..... | " .. | 120 | 500 | 620 | 15,680 | 25 all purposes. |
| Huronic..... | " .. | 100 | 340 | 440 | 36,000 | 81 " " |
| Henry Pedwell..... | " .. | 9 | 56 | 65 | 216 | 3 drinking and culinary. |
| Keewatin..... | " .. | 125 | 250 | 375 | 33,600 | 88 all purposes. |
| Kingston..... | " .. | 118 | 400 | 518 | 4,892 | 9.4 " " |
| Louis Philippe..... | " .. | 12 | ..... | ..... | 626 | " " |
| Laurentia..... | " .. | 10 | 100 | 110 | 70 | 0.6 drinking. |
| Laura H. Lee..... | " .. | 5 | 150 | 155 | 85 | 0.5 for drinking only. |
| Macassa..... | " .. | 30 | 712 | 742 | 1,500 | 2 drinking and culinary. |
| Manitoba..... | " .. | 55 | 121 | 176 | 5,300 | 30 all purposes. |
| Manitou..... | " .. | 27 | 128 | 155 | 125 | 0.8 drinking and culinary. |
| Mary Scott..... | " .. | 7 | 39 | 46 | 80 | 1.7 for drinking only. |
| Midland City..... | " .. | 22 | 550 | 572 | 121 | 0.2 drinking and culinary. |
| Modjeska..... | " .. | 32 | 942 | 974 | 364 | 0.4 all purposes. |
| Montreal..... | " .. | 125 | 500 | 625 | 900 | 1.4 drinking and culinary. |
| Noronic..... | " .. | 194 | 632 | 826 | 33,600 | 40 all purposes. |
| Northumberland..... | " .. | 26 | 1,150 | 1,176 | 1,365 | 1 " " |
| North American..... | " .. | 120 | 460 | 580 | 3,000 | 5.1 drinking and culinary. |
| Pelée..... | " .. | 13 | 300 | 313 | 120 | 0.4 " " |
| Quebec..... | " .. | 67 | 500 | 567 | 1,952 | 3.4 " " |
| Rapids King..... | " .. | 70 | 1,475 | 1,545 | 2,500 | 1.6 " " |
| Rapids Queen..... | " .. | 75 | 500 | 575 | 600 | 1 " " |
| Rapids Prince..... | " .. | 70 | 800 | 1,070 | 512 | 0.5 " " |
| Richleau..... | " .. | 180 | 500 | 680 | 13,360 | 19 " " |
| Saguenay..... | " .. | 115 | 410 | 525 | 905 | 1.6 all purposes. |
| Toronto..... | " .. | 100 | 550 | 650 | 6 044 | 9 " " |
| Thousand Islander..... | " .. | 34 | 870 | 904 | 2,000 | 2.2 drinking and culinary. |
| Three Rivers..... | " .. | 30 | 1,000 | 1,030 | 300 | 0.3 all purposes. |
| Turbinia..... | " .. | 47 | 500 | 547 | 9,562 | 17.4 " " |
| Victoria..... | " .. | 8 | 245 | 253 | 150 | 0.6 drinking and culinary. |
| Waubie..... | " .. | 12 | 450 | 462 | 215 | 0.5 " " |
| Wolfe Islander..... | " .. | 8 | 340 | 348 | 10 | 0.03 " " |
| Marquette No. 2..... | Car ferry..... | 40 | ..... | 40 | 355 | 9 " " |
| Ontario No. 1..... | " .. | 52 | 1,000 | 1,052 | 600 | 0.6 " " |
| Ontario No. 2..... | " .. | 52 | 1,000 | 1,052 | 600 | 0.6 " " |
| Alberta..... | Passenger and freight. | 30 | 70 | 100 | 3,500 | 35 all purposes. |
| Colima..... | " .. | 30 | 192 | 222 | 5,400 | 24 " " |
| Gaspesia..... | " .. | 30 | 50 | 80 | 3,600 | 45 " " |
| Nayarit..... | " .. | 30 | 192 | 222 | 6,800 | 30 " " |
| North Shore..... | " .. | 31 | 56 | 87 | 2,165 | 25 " " |

TABLE No. 9—VESSEL WATER SUPPLIES—Continued

| Name of Vessel | Type | Number of Persons living aboard vessel | | | Capacity of Water Tanks, Drinking and Culinary | Capacity Per Capita in Gallons |
|-------------------------|--------------|--|------------|-------|--|--------------------------------|
| | | Crew | Passengers | Total | Gallons | |
| Ashbay..... | Freight..... | 19 | | 19 | 1,152 | 60 drinking and culinary. |
| Athabasca..... | "..... | 30 | 70 | 100 | 2,400 | 24 all purposes. |
| Berryton..... | "..... | 29 | | 29 | 475 | 16 drinking and culinary. |
| Mary Boyce..... | "..... | 9 | | 9 | 210 | 23 " " |
| Bayton..... | "..... | 26 | | 26 | 935 | 36 all purposes. |
| Ben Maple..... | "..... | 19 | | 19 | 2,450 | 129 " " |
| Canadian..... | "..... | 30 | | | 1,900 | 63 drinking and culinary. |
| Cedarbay..... | "..... | 19 | | 19 | 1,064 | 56 " " |
| Claremont..... | "..... | 18 | | 18 | 245 | 13 " " |
| Collingwood..... | "..... | 29 | | 29 | 792 | 27 " " |
| Dalrymple..... | "..... | 21 | | 21 | 475 | 22 " " |
| W. H. Daniels..... | "..... | 21 | | 21 | 1,120 | 53 " " |
| Dan Proctor..... | "..... | 7 | | 7 | 80 | 11 " " |
| Edmonton..... | "..... | 29 | | 29 | 495 | 17 " " |
| Easton..... | "..... | 27 | | 27 | 500 | 18 " " |
| Emperor..... | "..... | 28 | | 28 | 633 | 22.6 " " |
| Glen Allan..... | "..... | 10 | | 10 | 206 | 20 " " |
| Glencairn..... | "..... | 21 | | 21 | 880 | 42 " " |
| Glendowan..... | "..... | 20 | | 20 | 420 | 21 " " |
| Glenegles..... | "..... | 33 | | 33 | 1,546 | 47 all purposes. |
| Glenellah..... | "..... | 20 | | 20 | 520 | 26 drinking and culinary. |
| Glenfinnan..... | "..... | 24 | | 24 | 420 | 17 " " |
| Glenisla..... | "..... | 24 | | 24 | 600 | 25 " " |
| Glenlivet..... | "..... | 19 | | 19 | 470 | 24 " " |
| Glenannox..... | "..... | 27 | | 27 | 475 | 17 " " |
| Gleneshee..... | "..... | 25 | | 25 | 300 | 12 " " |
| Glenmount..... | "..... | 21 | | 21 | 158 | 7 " " |
| Glenrig..... | "..... | 21 | | 21 | 260 | 12 " " |
| Grant Morden..... | "..... | 30 | | 30 | 3,100 | 103 all purposes. |
| G. R. Gray..... | "..... | 13 | 24 | 37 | 557 | 15 drinking and culinary. |
| Greypoint..... | "..... | 23 | | 23 | 210 | 9 " " |
| Hagarty..... | "..... | 28 | | 28 | 942 | 34 " " |
| Hamilton..... | "..... | 23 | | 23 | 822 | 35 " " |
| Howard M. Hanna..... | "..... | 32 | | 32 | 350 | 10 " " |
| Hitherwood..... | "..... | 24 | | 24 | 2,050 | 83 all purposes. |
| Iocelite..... | "..... | 21 | | 21 | 2,105 | 100 drinking and culinary. |
| Kamaris..... | "..... | 27 | | 27 | 1,100 | 40 " " |
| Keursurge..... | "..... | 29 | | 29 | 200 | 7 " " |
| Keenan..... | "..... | 8 | | 8 | 200 | 25 " " |
| Laketon..... | "..... | 26 | | 26 | 1,269 | 48 " " |
| Lord Strathcona..... | "..... | 24 | | 24 | 1,000 | 41 all purposes. |
| Maplebay..... | "..... | 19 | | 19 | 1,044 | 55 drinking and culinary. |
| Maplecourt..... | "..... | 30 | | 30 | 412 | 14 " " |
| Mapledawn..... | "..... | 25 | | 25 | 1,600 | 64 " " |
| Maple Heath..... | "..... | 20 | | 20 | 300 | 15 " " |
| Mapleton..... | "..... | 20 | | 20 | 712 | 35 all purposes. |
| Martian..... | "..... | 23 | | 23 | 1,336 | 58 drinking and culinary. |
| W. D. Mathews..... | "..... | 23 | | 23 | 1,690 | 73 " " |
| Mathewston..... | "..... | 30 | | 30 | 7,400 | 246 " " |
| Donald E. McKay..... | "..... | 24 | | 24 | 2,800 | 116 all purposes. |
| J. A. McKee..... | "..... | 19 | | 19 | 811 | 43 drinking and culinary. |
| J. E. McKinstry..... | "..... | 21 | | 21 | 1,420 | 67 " " |
| Metcalfe..... | "..... | 20 | | 20 | 173 | 8 " " |
| Midland King..... | "..... | 23 | | 23 | 619 | 26 " " |
| E. B. Osler..... | "..... | 28 | | 28 | 936 | 33 " " |
| Norman M. Paterson..... | "..... | 24 | | 24 | 1,920 | 80 " " |
| Poplarbay..... | "..... | 19 | | 19 | 500 | 26 " " |
| Puckasaw..... | "..... | 10 | | 10 | 490 | 49 " " |
| Riverton..... | "..... | 28 | | 28 | 1,475 | 53 " " |

DEPARTMENT OF HEALTH

TABLE No.9—VESSEL WATER SUPPLIES—*Concluded*

| Name of Vessel | Type | Number of Persons living aboard vessel | | | Capacity of Water Tanks, Drinking and Culinary | Capacity Per Capita in Gallons | |
|--------------------|-------------|--|------------|-------|--|--------------------------------|------------------------|
| | | Crew | Passengers | Total | Gallons | | |
| Royalton..... | Freight.... | 30 | | 30 | 2,932 | 97 | all purposes. |
| Sarnian..... | " | 22 | | 22 | 435 | 22 | drinking and culinary. |
| Sprucebay..... | " | 18 | | 18 | 1,000 | 55 | " |
| Susie Chipman..... | " | 8 | | 8 | 230 | 26 | " |
| Strathbogie..... | " | 12 | | 12 | 240 | 20 | " |
| Targe..... | " | 18 | | 18 | 1,400 | 77 | " |
| Valcartier..... | " | 23 | | 23 | 1,690 | 73 | " |
| Westmount..... | " | 28 | | 28 | 635 | 22 | " |
| James Whalen..... | " | 11 | | 11 | 100 | 9 | " |
| Willowbay..... | " | 19 | | 19 | 508 | 26 | " |
| Yorkton..... | " | 27 | | 27 | 970 | 35 | " |
| Sandland..... | Sand sucker | 27 | | 27 | 1,056 | 38 | " |

TABLE No. 10—GREAT LAKES STEAMSHIPS OF UNITED STATES REGISTER TRADING REGULARLY INTO CANADIAN PORTS

| Steamship | Type | Owner | Canadian Port |
|-----------------------------------|--------------|--|----------------------------|
| Fort Hamilton..... | Passenger... | Furness-Withy Co..... | Quebec. |
| Canadiana..... | " | Buffalo and Crystal Beach Corporation... | Crystal Beach. |
| Americana..... | " | " | " |
| Chicora..... | " | Erie Beach Amusements, Ltd..... | Fort Erie, Ont. |
| Franklin..... | " | " | " |
| Newton..... | " | " | " |
| O'Bedell..... | " | " | " |
| Orleans..... | " | " | " |
| Maitland No. 1..... | Car ferry... | Toronto, Hamilton and Buffalo Navigation Co..... | Port Maitland. |
| Ashtabula..... | " | Pennsylvania and Ontario Navigation Co. | Port Burwell. |
| Colonial..... | Passenger... | Western Reserve Navigation Co..... | Port Dover. |
| City of St. Ignace..... | " | " | Port Stanley. |
| Marquette and Bessemer No. 1..... | Car ferry... | Marquette and Bessemer Dock and Navigation Co..... | Erieau, Ont. |
| Marquette and Bessemer No. 2..... | " | " | " |
| Frank E. Kirby..... | Passenger... | Nicholson Transit Co., Detroit..... | Kingsville, Ont. |
| Detroit..... | Car ferry... | Wabash Railway Co., Detroit..... | Windsor, Ont. |
| Transfer..... | " | " | " |
| Transport..... | " | " | " |
| Brittania..... | Ferry..... | Detroit and Windsor Ferry Co..... | " |
| Columbia..... | " | " | " |
| La Salle..... | " | " | " |
| Papoose..... | " | " | " |
| Pleasure..... | " | " | " |
| Pontiac..... | " | " | " |
| Promise..... | " | " | " |
| Sappho..... | " | " | " |
| Ste. Clair..... | " | " | " |
| Victoria..... | " | " | " |
| Essex..... | " | Walkerville and Detroit Ferry Co..... | Walkerville. |
| Wayne..... | " | " | " |
| City of Toledo..... | Passenger... | White Star Line..... | Sarnia and Port Lambton. |
| Owana..... | " | " | " |
| Tashmoo..... | " | " | " |
| Wauketa..... | " | Detroit..... | Sarnia, Port Lambton, etc. |
| Creyhound..... | " | " | Sarnia, Goderich, etc. |

TABLE No. 10—GREAT LAKES STEAMSHIPS OF UNITED STATES REGISTER
TRADING REGULARLY INTO CANADIAN PORTS—*Continued*

| Steamship | Type | Owner | Canadian Port |
|-------------------------|--------------|--|----------------|
| James Beard..... | Passenger.. | Port Huron and Sarnia Ferry Co..... | Sarnia, Ont. |
| City of Cheboygan..... | " | " | " |
| City of Sarnia..... | " | " | " |
| Hiawatha..... | " | " | " |
| St. Lawrence..... | " | " | " |
| North American..... | " | Chicago, Duluth and Georgian Bay Trans- sit Co..... | Parry Sound. |
| South American..... | " | " | " |
| America..... | " | United States and Dominion Transporta- tion Co..... | Port Arthur. |
| Bennington..... | Freight..... | Rutland-Lake Michigan Transit Company | Brockville. |
| Brockton..... | " | | |
| Burlington..... | " | | |
| Back Bay..... | " | | |
| Brandon..... | " | | |
| New York News..... | " | Chicago Tribune Transportation Co..... | Montreal. |
| Chicago Tribune..... | " | " | " |
| Kearsage..... | " | Canada Atlantic Transit Co..... | Depot Harbour. |
| Arthur Orr..... | " | " | " |
| Frank B. Baird..... | " | Boland and Cornelius, Buffalo, New York. | Port Colborne. |
| Norman P. Clement..... | " | " | " |
| William H. Daniels..... | " | " | " |
| Edwin T. Douglass..... | " | " | " |
| Albert C. Field..... | " | " | " |
| Nisbet Grammer..... | " | " | " |
| Judge Hart..... | " | " | " |
| Watkins F. Nisbet..... | " | " | " |
| Robert W. Pomeroy..... | " | " | " |
| John J. Rammacher..... | " | " | " |

TABLE No. 11—PASSENGER STEAMSHIPS OF CANADIAN REGISTER OPERATING
ON THE GREAT LAKES AND ST. LAWRENCE RIVER

| Steamship | Owner | Port at which inspected | Date of last inspection | Condition of water supply |
|--------------------|--------------------------------------|-------------------------------|-------------------------------|---------------------------------|
| Amherst..... | Gulf Pulp and Paper Co., Quebec.. | Not inspected... | May 10, 1925 | Fair. |
| Cape Diamond..... | Canada Steamship Lines Limited. | Quebec..... | | |
| Etoile..... | Quebec..... | Not inspected... | 9, 1925 | Very doubtful. |
| Brumath..... | J. Rioux, Ruisseau Arbour, Gaspé. | Quebec..... | " 9, 1925 | " |
| Champion..... | La Traverse de Levis Limitee, | Not inspected.. | " | " |
| Colomb..... | Levis..... | | | |
| John S. Thom..... | Quebec and Levis Ferry Co..... | " | 9, 1925 | " |
| Alphonse G..... | " | " | | |
| Lauson..... | " | Quebec..... | " 9, 1925 | " |
| Le Progress..... | Corporation of Three Rivers, P.Q. | Not inspected... | 4, 1925 | " |
| Terrebonne..... | G. Dansereau, Grenville, P.Q..... | " | | |
| Laurentia..... | J. O. Sicotte, Valleyfield, P.Q..... | Montreal..... | " 4, 1925 | " |
| Soulanges..... | " | " | " | " |
| Beauharnois..... | Calixte Guyon, Montreal..... | Quebec..... | May 7, 1925 | Fair. |
| Boucherville..... | Alexandre Desmarteau..... | Not inspected... | | |
| Rapids Prince..... | Canada Steamship Lines Limited. | Montreal..... | May 7, 1925 | " |
| Rapids Queen..... | " | " | " 7, 1925 | " |
| Three Rivers..... | " | " | " 8, 1925 | Very doubtful. |
| Quebec..... | " | " | " 8, 1925 | " |
| Richelieu..... | " | " | " 7, 1925 | Good. |
| Montreal..... | " | " | " 7, 1925 | Fair. |
| Saguenay..... | " | " | " 5, 1925 | " |
| Manoa..... | " | Not inspected... | April 19, 1925 | " |
| Cape Eternity..... | " | Toronto..... | | |
| Longueuil..... | " | Not inspected... | 1925..... | " |
| Labrador..... | Clarke Steamship Company Ltd.. | Quebec..... | | |
| Gaspesia..... | " | " | May 11, 1925 | " |
| North Shore..... | " | " | " 11, 1925 | " |
| Colima..... | " | " | " 11, 1925 | " |
| Nayarit..... | " | Montreal..... | " 12, 1925 | " |

TABLE No. 11—PASSENGER STEAMSHIPS OF CANADIAN REGISTER OPERATING ON THE GREAT LAKES AND ST. LAWRENCE RIVER—*Concluded*

| Steamship | Owner | Port at which inspected | Date of last inspection | Condition of water supply |
|-----------------------------------|--|-------------------------|-------------------------|---------------------------|
| Victoria..... | M. Normand..... | " | June 4, 1924 | Doubtful. |
| Empress..... | Empress Navigation Company.... | " | June 7, 1924 | " |
| Garden City..... | Joseph Rinfret..... | " | May 5, 1925 | " |
| Brittanic..... | Montreal and Cornwall Navigation Company..... | " | June 3, 1924 | Very doubtful. |
| Levis..... | Prescott and Ogdensburg Ferry Company..... | Prescott..... | Oct. 6, 1925 | Fair. |
| Charles Lyon..... | C.P.R. Car Ferry Company..... | " | Sept. 3, 1923 | " |
| Miss Vanderburg..... | Prescott and Ogdensburg Ferry Company..... | " | Oct. 6, 1925 | " |
| Missisquoi..... | Thousand Island Navigation Co..... | Kingston..... | May 14, 1925 | Doubtful. |
| Frontenac..... | " | Gananoque..... | Oct. 8, 1925 | Fair. |
| Waubic..... | Rockport Navigation Co..... | Kingston..... | June 16, 1924 | " |
| Wolfe Islander..... | Municipality of Wolfe Island..... | " | May 14, 1925 | " |
| Brockville..... | Kingston Navigation Co..... | " | Oct. 7, 1925 | " |
| Ontario No. 1..... | Ontario Car Ferry Co..... | Cobourg..... | Sept. 14, 1925 | Good. |
| Ontario No. 2..... | " | " | " 14, 1925 | " |
| Cayuga..... | Canada Steamship Lines Limited. | Toronto..... | July 3, 1925 | Fair. |
| Corona..... | " | " | " 4, 1925 | " |
| Chippewa..... | " | " | " 4, 1925 | " |
| Macassa..... | " | " | April 29, 1925 | Very doubtful. |
| Modjeska..... | " | " | May 6, 1924 | Doubtful. |
| Kingston..... | " | " | " 6, 1925 | Fair. |
| Toronto..... | " | " | " 3, 1925 | " |
| Turbinia..... | " | " | " 3, 1925 | " |
| Cape Trinity..... | " | " | April 19, 1925 | " |
| Dalhousie City..... | Niagara, St. Catharines and Toronto Navigation Co..... | " | July 7, 1925 | " |
| Northumberland..... | " | " | " 7, 1925 | " |
| White Star..... | Canada Steamship Lines Limited. | Not inspected... | " | " |
| Thousand Islander..... | " | Chatham..... | " 23, 1925 | " |
| Pelee..... | Windsor and Pelee Island Co..... | Kingsville..... | " 24, 1924 | " |
| Rapids King..... | Canada Steamship Lines Limited. | Wallaceburg..... | Aug. 18, 1924 | " |
| Noronic..... | Northern Navigation Co..... | Sarnia..... | Mar. 28, 1925 | Good. |
| Hamonic..... | " | " | " 28, 1925 | " |
| Huronic..... | " | " | " 28, 1925 | Fair only. |
| Louis Phillipe..... | Canada Steamship Lines Limited. | " | April 26, 1924 | Fair. |
| Caribou..... | Dominion Transportation Co..... | Owen Sound..... | " 8, 1925 | " |
| Manitou..... | " | " | " 8, 1925 | " |
| Henry Pedwell..... | John Tackaberry..... | " | " 18, 1924 | Doubtful. |
| Michipicoten..... | Owen Sound Transportation Co..... | " | " 9, 1925 | Very doubtful. |
| Laura H. Lee..... | " | " | " 9, 1925 | Fair. |
| Midland City..... | Georgian Bay Tourist Co..... | Midland..... | May 14, 1924 | Fair. |
| City of Dover..... | Honey Harbour Navigation Co..... | " | June 30, 1923 | Doubtful. |
| Alberta..... | Canadian Pacific Great Lakes Steamships..... | Port McNicoll..... | Mar. 24, 1925 | Fair. |
| Athabasca..... | " | " | " 24, 1925 | " |
| Assiniboia..... | " | " | " 24, 1925 | " |
| Keewatin..... | " | " | " 24, 1925 | Good. |
| Manitoba..... | " | " | " 24, 1925 | Fair. |
| Harrow of Port Arthur..... | " | Not inspected... | " | " |
| Mary Scott..... | Algoma Transit Co..... | Sault Ste. Marie..... | Aug. 1, 1925 | " |
| Alexandra..... | Alexandra Steamship Co..... | Owen Sound..... | April 8, 1925 | Doubtful. |
| Islet Prince..... | Terminal Transit Co..... | Not inspected... | " | " |
| Algoma..... | International Transit Co..... | " | " | " |
| Marquette and Bessemer No. 1..... | Lake Erie Navigation Co..... | " | " | " |

The following is a compilation of information supplied from the Provincial Department of Health of Quebec. This table shows the results of the analyses of a series of samples of water collected, during 1925, from the supplies available for the use of persons travelling on the passenger trains of various railways in that province.

From a total of seventeen samples collected from trains operated by the Canadian Pacific Railways, six were found to be contaminated by sewage organisms, or 35 per cent.

Out of a total of thirty-one samples collected from trains operated by the Canadian National Railways, seven were found to be contaminated by the presence of sewage organisms, or 22 per cent.

Of two samples taken from drinking water available on trains operated by the Central Vermont Railway, one showed contamination in a very high degree.

One sample out of three taken from the drinking water available on passenger trains of the New York Central Railway was impure.

Four samples out of six derived from the drinking water available on passenger trains of the Quebec Central Railway showed various degrees of contamination.

So also, the presence of organisms of the B. colon group was found in samples derived from the drinking water of passenger trains operated by the Delaware and Hudson Railway and the Temiscouata Railway.

TABLE No. 12—PRESENCE OF B. COLON GROUP IN DRINKING WATER AVAILABLE ON PASSENGER TRAINS BEING OPERATED IN THE PROVINCE OF QUEBEC

| Railway | Direction of Train | | Origin of Water | Ice placed in water | Common Drinking Cup | When Sample collected | Presence of B. Colon Group in 5 c.c. |
|---------|--------------------|-------------------|------------------|---------------------|---------------------|-----------------------|--------------------------------------|
| | Coming from | Going to | | | | | |
| C.P.R. | Montreal | Pte. Fortune | Montreal | No | No | 5-5-25 | 0/4 |
| " | " | " | " | No | No | 2-6-25 | 1/4 |
| " | " | Quebec | " | No | No | 14-4-25 | 0/4 |
| " | " | St. Gabriel de B. | " | No | No | 18-2-25 | 2/4 |
| " | " | Farnham | " | No | No | 23-2-25 | 0/4 |
| " | " | Labelle | On the train | No | No | 18-3-25 | 0/4 |
| " | " | St. Lin. | " | No | No | 18-3-25 | 0/4 |
| " | " | Mont Laurier | " | No | No | 18-3-25 | 1/4 |
| " | Vaudreuil | Montreal | Montreal | No | No | 5-5-25 | 2/4 |
| " | " | " | " | No | No | 28-5-25 | 0/4 |
| " | " | " | " | No | No | 2-6-25 | 0/4 |
| " | " | " | " | No | No | 30-4-25 | 0/4 |
| " | Pte. Fortune | " | " | No | Yes | 23-2-25 | 4/4 |
| " | Farnham | Bedford | Farnham | No | No | 18-3-25 | 0/4 |
| " | Ste. Therese | St. Eustache | On the train | No | No | 3-2-25 | 0/4 |
| " | St. Guillaume | Farnham | Farnham | Yes | No | 3-2-25 | 0/4 |
| " | Calumet | Montreal | Reservoir | No | No | 2-3-25 | 1/4 |
| " | Ottawa | " | On the train | No | No | 18-3-25 | 0/4 |
| C.N.R. | Montreal | Vaudreuil | Montreal | Yes | No | 30-4-25 | 0/4 |
| " | " | St. Hyacinthe | " | No | No | 28-1-25 | 0/4 |
| " | " | Island Pond | " | No | No | 16-2-25 | 0/4 |
| " | " | " | " | No | Yes | 17-2-25 | 0/4 |
| " | " | Halifax | Mtl. Riv. d. L. | No | No | 10-3-25 | 0/4 |
| " | " | Massena | Montreal | No | No | 11-2-25 | 0/4 |
| " | " | Halifax | " | Yes | No | 9-2-25 | 0/4 |
| " | " | Coteau Jet | " | No | No | 28-5-25 | 0/4 |
| " | " | St. Hyacinthe | " | No | No | 10-6-25 | 0/4 |
| " | " | Chicago | " | No | No | 11-4-25 | 1/4 |
| " | Vaudreuil | Montreal | " | No | No | 23-5-25 | 0/4 |
| " | St. Hyacinthe | " | " | No | No | 10-6-25 | 0/4 |
| " | Victoriaville | Doucet Landing | Victoriaville | Yes | No | 26-10-25 | 0/4 |
| " | Mont-Joli | Montreal | Mont-Joli | Yes | No | 23-2-25 | 1/4 |
| " | Charny | Campbellton | Charny | Yes | No | 16-2-25 | 3/4 |
| " | Quebec | Chicoutimi | Quebec | No | No | 2-2-25 | 0/4 |
| " | " | Cochrane | Quebec or Parent | Yes | No | 19-2-25 | 0/4 |
| " | " | " | Parent | Yes | No | 17-3-25 | 1/4 |
| " | Chicago | Montreal | Toronto | No | No | 11-6-25 | 1/4 |
| " | Campbellton | Levis | Campbellton | No | Yes | 19-3-25 | 0/4 |
| " | " | Charny | " | Yes | No | 17-4-25 | 1/4 |
| " | Waterloo | Montreal | St. Waterloo | No | Yes | 13-4-25 | 0/4 |
| " | Roberval | Chambord | St. Felicien | No | No | 2-2-25 | 0/4 |
| " | " | " | " | No | No | 14-4-25 | 0/4 |
| " | Chambord | Chicoutimi | Chambord | Yes | No | 9-2-25 | 0/4 |
| " | Deschailons | Levis | Levis | Yes | No | 9-2-25 | 0/4 |

TABLE No. 12—PRESENCE OF B. COLON GROUPS IN DRINKING WATER AVAILABLE ON PASSENGER TRAINS BEING OPERATED IN THE PROVINCE OF QUEBEC—*Concluded*

| Railway | Direction of Train | | Origin of Water | Ice placed in water | Common Drinking Cup | When Sample collected | Presence of B. Colon Group in 5 c.c. |
|------------------|--------------------|--------------------|-------------------------------|---------------------|---------------------|-----------------------|--------------------------------------|
| | Coming from | Going to | | | | | |
| C.N.R. | Cochrane..... | Quebec..... | Cochrane or O'Brien | Yes | No | 16-2-25 | 0/4 |
| " | " | " | Cochrane..... | Yes | No | 25-2-25 | 0/4 |
| " | " | " | Cochrane or O'Brien | Yes | No | 9-3-25 | 2/4 |
| " | Island Pond..... | Montreal..... | Island Pond..... | No | No | 20-2-25 | 0/4 |
| " | Halifax..... | " | Campb. and Bathurst..... | No | No | 10-3-25 | 0/4 |
| C.V. | Montreal..... | St. Armand..... | Montreal-St. Alban. | No | No | 2-2-25 | 0/4 |
| " | St. Armand..... | Montreal..... | St. Armand..... | No | Yes | 21-10-25 | 4/4 |
| N.Y.C. | Montreal..... | New York..... | Montreal and New York..... | No | No | 18-2-25 | 0/4 |
| " | " | New York..... | Malone..... | No | No | 18-2-25 | 1/4 |
| " | " | Valleyfield..... | Montreal and Valleyfield..... | No | No | 18-2-25 | 0/4 |
| Q.C. | Quebec..... | Sherbrooke..... | Quebec..... | Yes | No | 18-3-25 | 1/3 |
| " | " | Lac Frontiere..... | Quebec..... | Yes | No | 25-5-25 | 1/2 |
| " | " | Sherbrooke..... | " | No | No | 29-7-25 | 4/4 |
| " | Megantic..... | Vallee Jct..... | Valley Jct..... | No | No | 4-9-25 | 2/4 |
| " | Lac Frontiere..... | Quebec..... | Quebec..... | Yes | No | 25-5-25 | 0/2 |
| Q.M. & S. | Sorel..... | Nicolet..... | Lac Frontiere..... | No | No | 4-9-25 | 0/4 |
| " | Fortierville..... | Sorel..... | Sorel..... | No | Yes | 17-2-25 | 0/4 |
| D. & H. | Montreal..... | New York..... | River Richelieu..... | No | Yes | 24-2-25 | 0/4 |
| " | " | " | Montreal and Albany..... | No | No | 10-3-25 | 2/4 |
| " | New York..... | Montreal..... | New York and Montreal..... | No | No | 10-3-25 | 0/4 |
| Que. Oriental... | New Carlisle..... | Matapedia..... | Source..... | No | Yes | 26-2-25 | 0/4 |
| Temiscouata... | Riv-du-Loup..... | Edmundston..... | Riviero-du-Loup..... | Yes | No | 27-3-25 | 1/4 |

FINANCIAL STATEMENT

SUMMARY OF EXPENDITURE FOR THE FISCAL YEAR 1925-26

| Service | Gross Expenditure | Refunds | Net Expenditure |
|--|-------------------|----------|-----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Civil Government Salaries..... | 153,503 99 | | 153,503 99 |
| Civil Government Generally..... | 1,210 65 | | 1,210 65 |
| Civil Government Contingencies..... | 47,645 02 | 2,263 72 | 45,381 30 |
| Food and Drugs..... | 79,241 90 | 1,739 38 | 77,502 52 |
| Opium and Narcotic Drugs..... | 15,978 76 | 86 74 | 15,892 02 |
| Proprietary or Patent Medicines..... | 2,404 35 | | 2,404 35 |
| Pollution of Inland Waters..... | 5,400 00 | | 5,400 00 |
| Marine Hospitals, etc..... | 141,844 73 | 1,845 75 | 139,998 98 |
| Quarantine..... | 176,470 52 | 263 18 | 176,207 34 |
| Leprosy..... | 19,151 65 | | 19,151 65 |
| Public Works Health Act..... | 4,292 55 | 200 00 | 4,092 55 |
| Immigration Medical Inspection..... | 66,990 04 | 696 09 | 66,293 95 |
| Laboratory of Hygiene..... | 4,359 90 | 254 10 | 4,105 80 |
| Veneral Diseases..... | 119,519 31 | | 119,519 31 |
| Gratuities, Civil Service Act, 1918, Sec. 30..... | 350 00 | | 350 00 |
| Unforeseen expenses..... | 97 45 | | 97 45 |
| Child Welfare Association..... | 5,000 00 | | 5,000 00 |
| Canadian Social Hygiene Council..... | 10,000 00 | | 10,000 00 |
| Canadian National Committee on Mental Hygiene..... | 10,000 00 | | 10,000 00 |
| Canadian Tuberculosis Association..... | 25,000 00 | | 25,000 00 |
| Allowance to the widow of the late A. Laliberte..... | 3,000 00 | | 3,000 00 |
| | 891,460 82 | 7,348 96 | 884,111 86 |

REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL YEAR 1925-26

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|------------------|----------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| "A"—Food and Drugs..... | 5,450 00 | | 5,450 00 |
| "B"—Opium and Narcotic Drugs..... | 13,836 78 | 1,003 35 | 12,833 43 |
| "C"—Patent Medicines..... | 7,141 58 | 522 50 | 6,619 08 |
| "D"—Sick Mariners' Dues..... | 191,934 61 | 1,362 81 | 190,571 80 |
| "E"—Casual Revenue..... | 22,464 16 | 2 60 | 22,461 59 |
| | 240,827 13 | 2,891 26 | 237,935 87 |

"A"—FOOD AND DRUGS NET REVENUE, 1925-26

| | Analysis Fees | Penalties | Costs | Total |
|-----------------------|------------------|-----------|---------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 45 00 | | | 45 00 |
| Quebec..... | | 125 00 | 40 00 | 165 00 |
| Ontario..... | 3,490 00 | 620 00 | 289 00 | 4,399 00 |
| Manitoba..... | 70 00 | | | 70 00 |
| Alberta..... | | 125 00 | 50 00 | 175 00 |
| British Columbia..... | 8 00 | 425 00 | 160 00 | 593 00 |
| | 3,616 00 | 1,295 00 | 539 00 | 5,450 00 |

"B"—OPIUM AND NARCOTIC DRUGS NET REVENUE, 1925-26

| | Business Licenses | Import Licenses | Export Licenses | Penalties | Seizures | Total |
|-----------------------|----------------------|--------------------|--------------------|-----------|----------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 90 00 | | | | | 90 00 |
| New Brunswick..... | 80 00 | | | 1,824 99 | | 1,904 99 |
| Quebec..... | 1,035 00 | 445 00 | 15 00 | 2,965 70 | 121 88 | 4,582 58 |
| Ontario..... | 1,105 00 | 115 00 | 5 00 | 1,975 15 | | 3,200 15 |
| Manitoba..... | 325 00 | | | 200 00 | | 525 00 |
| Saskatchewan..... | 35 00 | | | 810 00 | | 845 00 |
| Alberta..... | 135 00 | | | 226 00 | | 361 00 |
| British Columbia..... | 96 00 | 15 00 | | 1,179 71 | 9 00 | 1,299 71 |
| Foreign..... | 25 00 | | | | | 25 00 |
| | 2,926 00 | 575 00 | 20 00 | 9,181 55 | 130 88 | 12,833 43 |

"C"—PATENT MEDICINES NET REVENUE, 1925-26

| | Penalties | Registra- tion Fees at \$2 each | License Fees at \$1 each | Total |
|---------------------------|-----------|---------------------------------------|--------------------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 22 00 | 80 00 | 102 00 |
| New Brunswick..... | | 28 00 | 137 00 | 165 00 |
| Prince Edward Island..... | | | 12 00 | 12 00 |
| Quebec..... | 190 23 | 338 00 | 1,431 00 | 1,959 23 |
| Ontario..... | 30 70 | 502 00 | 2,217 15 | 2,749 85 |
| Manitoba..... | | 82 00 | 159 00 | 241 00 |
| Saskatchewan..... | | 10 00 | 31 00 | 41 00 |
| Alberta..... | | 28 00 | 96 00 | 124 00 |
| British Columbia..... | | 28 00 | 68 00 | 96 00 |
| Foreign..... | | 192 00 | 937 00 | 1,129 00 |
| | 220 93 | 1,230 00 | 5,168 15 | 6,619 08 |

DEPARTMENT OF HEALTH

"D"—SICK MARINERS' DUES REVENUE, 1925-26

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|----------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 45,765 84 | 275 71 | 45,490 13 |
| New Brunswick..... | 22,501 15 | 139 26 | 22,361 89 |
| Prince Edward Island..... | 948 24 | 3 36 | 944 88 |
| Quebec..... | 54,181 13 | 422 68 | 53,758 50 |
| British Columbia..... | 68,538 20 | 521 80 | 68,016 40 |
| | 191,934 61 | 1,362 81 | 190,571 80 |

"E"—CASUAL REVENUE, 1925-26

| | Total |
|---|-----------|
| | \$ cts. |
| Fumigation of ships..... | 14,179 64 |
| Hospital care of passengers..... | 6,287 95 |
| Department of Customs and Excise, use of launch <i>Evelyn</i> | 1,800 00 |
| Refunds of previous years' expenditure..... | 22 97 |
| Sundry sales..... | 171 00 |
| | 22,461 56 |

DOMINION OF CANADA

REPORT

OF THE

DEPARTMENT OF HEALTH

FOR THE

FISCAL YEAR ENDED MARCH 31, 1927



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1928

*To His Excellency the Right Honourable Viscount Willingdon, G.C.S.I.,
G.C.M.G., G.C.I.E., G.B.E., Governor General and Commander in Chief
of the Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to lay before Your Excellency the Report of the Department of Health of Canada, for the fiscal year ended March 31, 1927.

I have the honour to be, sir,

Your Excellency's most obedient servant,

J. H. KING,

Minister of Health.

OTTAWA, April 1, 1927.

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REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE FISCAL YEAR ENDED MARCH 31, 1927

OTTAWA, April 1, 1927.

Hon. J. H. KING, M.D.,
Minister of Health,
Ottawa.

SIR,—I have the honour to report on the Department of Health for the year ended March 31, 1927, under the following headings:—

1. Food and Drugs Division.
2. Narcotic Division.
3. Proprietary or Patent Medicines.
4. Pollution of the Inland Waters of Canada.
5. Marine Hospitals Service.
6. Quarantine Service (including Leper Stations).
7. Immigration Medical Service.
8. Laboratory of Hygiene.
9. Venereal Disease Control.
10. Child Welfare.
11. Hospitalization and Sanitation.
12. Financial Statement.

J. A. AMYOT,
Deputy Minister of Health.

FOOD AND DRUGS DIVISION

Throughout the year inspection and laboratory service were maintained for the administration of the Food and Drugs Act, the Honey Act and the Maple Products Act. Twenty-six inspectors of food and drugs were on duty in districts with headquarters in the larger centres of population and the more important ports of entry.

In addition to the laboratories in Ottawa, branch laboratories were operated in Halifax, Montreal, Winnipeg, and Vancouver. The work done was mainly in connection with samples submitted by inspectors of food and drugs for the purposes of the Food and Drugs Act, but analyses were made also for other divisions or branches, especially for the administration of the Acts dealing with narcotic drugs, and patent medicines. Co-operation with other departments of Government has been observed to the fullest possible extent. Samples totalling 1,964 were examined for the following departments: Agriculture, Soldiers' Civil Re-establishment, National Defence, National Revenue, Marine and Fisheries, Mines, Post Office, and Immigration. Samples other than narcotic drugs, totalling 344, were submitted by the Royal Canadian Mounted Police.

The following table summarizes the laboratory work for the year:—

SAMPLES EXAMINED IN THE FOOD AND DRUG LABORATORIES

| Nature of Samples | Laboratories | | | | |
|--|--------------|---------|----------|----------|-----------|
| | Ottawa | Halifax | Montreal | Winnipeg | Vancouver |
| From inspectors of food and drugs..... | 2,249 | 1,086 | 783 | 1,015 | 1,819 |
| Department of Agriculture..... | 305 | ..... | 377 | 42 | 295 |
| Royal Canadian Mounted Police (narcotics)..... | 122 | 20 | 119 | 27 | 56 |
| Other departments of Government..... | 163 | 9 | 1 | 746 | 26 |
| Miscellaneous..... | 72 | ..... | 269 | 4 | 1 |
| Total..... | 2,911 | 1,115 | 1,549 | 1,834 | 2,197 |

Grand total, 9,606

The following outline of the work makes brief mention of some of the more important features:—

Alimentary Pastes (Noodles, Macaroni, Spaghetti)

A total of forty-seven samples examined during the year represents inspection of importations and domestic manufacture. Alimentary pastes of the highest quality contain egg and are yellow in colour. The appearance may be simulated by the use of coal tar colours, even if the egg is not an ingredient. This practice of adding artificial colouring is a contravention of section 5 of the Food and Drugs Act. A number of Canadian manufacturers are making the best grades of macaroni and noodles without adding colour and it is expected that there will be no great difficulty in securing compliance with a request that dyes be no longer used in making these foods.

Apples (Arsenical Spray Contamination)

Further examinations were made for arsenical spray contaminations. The analysis of twenty-one samples of the Halifax laboratories confirmed the findings of the previous year, in effect, that Nova Scotia apples are not dangerously contaminated.

Baking Powder

Fifty-five samples were examined and found free from arsenic and heavy metals. A few samples were found below standard in available carbon dioxide content. Upon investigation these samples were found to be from old deteriorated stock which the vendors, upon advice, afterwards destroyed or returned to the manufacturers.

Beverages

In the analysis of so-called soft drinks or temperance beverages (287 samples) special attention was paid to the detection of saccharin, the indiscriminate use of which is prohibited by the regulations. In several instances it was found necessary to institute legal action where the manufacturer wilfully neglected to readjust working formula whereby the use of saccharin might be abandoned. A special effort was made to correct labelling. Considerable progress has been made, although there is no satisfactory method of dealing with the labelling of beverages from bulk at refreshment booths and exhibition stalls.

It was found necessary to enter prosecution to stop the fraudulent sale of an orange drink made from orange juice, water, sugar, and colouring matter. In spite of repeated warnings the manufacturer and vendor persisted in adver-

tising and offering this for sale as Orange Juice. A conviction fortunately followed by prominent publicity in the daily press has had a wholesome effect upon the entire situation.

Butter

Six hundred and nineteen samples were submitted by the inspectors of food and drugs and the inspectors appointed under the Dairy Industries Act. One shipment of Australian butter and one shipment of New Zealand butter containing boric acid and not marked in accordance with requirements of regulations made under the Food and Drugs Act, were admitted after correction of labelling. The adulteration with vegetable fats and oils appeared much less frequently than in the previous year.

Candies

Twenty-two samples of caramels were found free from paraffin. The remaining samples, chiefly jelly beans and cheaper confections were examined from the standpoint of colouring matter. As a result of the work it is believed that the majority of candy manufacturers have discontinued the use of non-permitted dyes. Others appear to be more evasive as inspection of premises shows no non-permitted dyes in stock, and yet such colours appear in their finished goods in retail stores. In these circumstances it may be found necessary to enter prosecution against the vendor, who can then invoke section 17 of the Food and Drugs Act.

Cocoa Products (Beans, Powder, and Butter)

In all, thirty-eight samples were analyzed during the year. Several complaints from private individuals suggested the possibility of defects in the quality of these products as sold. Investigation led to the conclusion that the beans were reasonably free from mould; the powders did not contain excess of fibre and the cocoa butter was not adulterated, although one import shipment contained artificial colour. Entry was allowed to this shipment after labelling was corrected.

Coffee

Of eighty-eight samples of coffee examined, only two were found to be adulterated, in both cases by the addition of about 15 per cent of chicory which was put in when the beans were ground. All other samples were found to be genuine.

Diabetic Foods (including Diabetic Flour)

Twenty complete analyses were made. These examinations were conducted because it was suspected that a number of breads sold under labels indicating that they had special merit for the use of diabetics seemed to resemble ordinary brown bread. Results of analyses showed that the suspicion was well founded, as a number of samples contained very large proportions of glycogenic carbo-hydrates. Faulty labelling was immediately corrected and misleading claims were discontinued.

Dyes (Food Colours)

General improvement was noted in food colours imported and offered for sale. In a total of 139 samples analyzed, those manufactured in Canada were found without exception to be of highest quality, labelled and marked in compliance with the requirements of the regulations. It is expected that minor changes in Regulations will effect further improvement in the entire situation.

Fish (Canned Fish, and Fish Pastes)

In all sixty-eight samples were examined. Upon investigating complaints that certain stocks of sardines were badly contaminated with metal from the containers, it was found that the tin content was negligible. Certain brands of imported fish paste coloured with iron oxide or aniline dyes were refused entry. It is held that colouring matter in these products is quite unnecessary and has the effect of making the articles appear of better value than they really are.

Examination of thirteen samples of anchovies resulted in refusal of entry to one shipment because of advanced decomposition.

Egg Products (Egg Albumen, Egg Liquid, Egg Powder, Egg Yolk Powder)

Sixteen samples examined were found to be of satisfactory quality. Apparently the contamination of powdered egg with metallic zinc is no longer a menace to health as the factory processes have been greatly improved in recent years. The examination of five samples of egg substitute resulted in the correction of labelling in two instances. Such products cannot be regarded as unwholesome but should be sold for what they really are.

Flavouring Extracts

One hundred and eighty-one samples examined represent the trade in pure flavourings or mixtures. No attempt has been made to make any specific standards for artificial flavourings. Great improvement was noted in the quality of lemon extracts, but there is still evidence of misbranding in the vanilla flavourings and vanilla mixtures. "Vanilla Mixture" should contain at least 51 per cent of vanilla extract.

Fruits (Dried Fruits; Apples, Apricots, Peaches, Pears, Prunes and Raisins)

A rigid inspection of imported dried fruit, resulted in the collection of 1,070 samples which were analyzed in the laboratories. Three shipments (105 cases) of apricots were refused entry at Halifax, because of excess sulphite. The Winnipeg station reports refusal of entry to 400 cases of dried peaches. The treatment of raisins with mineral oil has apparently been abandoned.

Fruits and Fruit Pulp

Six hundred and three samples were examined during the year. The quality of oranges inspected at ports of entry was found to be much better than that noted in previous years. A shipment of orange pulp coming from Spain was found to be in bad condition, in active fermentation, and consequently was refused.

Gelatin and Jelly Powders

One hundred and forty-seven samples were analyzed. While no defects were noted in the quality of the gelatin there was evident need for correction of packaging and labelling. Slack filled packages were very frequently encountered in this line of goods. It was also found necessary to insist upon alterations in certain advertisements for the reason that the flavourings used are very seldom obtained from the fruits pictured on the labels but are mixtures of synthetic organic compounds.

Honey

Twenty-two samples were found to be free from adulteration although it was suspected that immature honey with high water content was being offered for sale. It was found necessary to take steps to correct misbranding advertisements which proclaimed that honey possessed special merit as a food in diabetes and anaemia because it contained a so-called natural sugar and also iron. These exaggerated statements had their origin in excessive enthusiasm based on misconceptions.

Jams, Jellies and Marmalades

Judging from the 105 samples examined, there is no great improvement to be noted in the quality of jams as sold. Many stocks may meet standards and be within the law although the quality may be greatly inferior to that of the best which can be made.

Maple Products (Maple Butter, Maple Sugar, Maple Syrup)

Twenty-two prosecutions were instituted as the result of analyses of 583 samples, complaint in each and every case arising from adulteration by the addition of other sugar. In addition to the penalties imposed by the courts many offenders were further penalized by confiscation of stocks, which were disposed of by donation to charitable institutions.

In the enforcement of the special clauses in the Maple Products Act which prohibit the sale of imitation maple products and limit the use of the word "Maple," considerable advance was made in stopping the manufacture of brown sugar cakes resembling maple sugar in appearance. One brand of so-called "pancake syrup" put up by a maple products company was put off the market. Arrangements have been made for special field inspectors to operate during the coming maple season. Work of the laboratories is also being planned to make provision for the analyses of samples and continuation of research work on this subject.

Meat and Meat Products (Sausages, Weiners and Hamburg Steak)

It was found necessary to institute prosecution in forty cases arising from the sale of adulterated meat products of which 393 samples were examined. The adulteration consisted chiefly in the addition of prohibited preservatives and colouring matter. The general survey of the market revealed such an undesirable condition that it is planned to extend this work during the coming year.

Nuts (Almonds, Brazil, Chestnut, Filberts, Pecans, Peanuts, Pignolias and Walnuts)

The majority of the 263 samples examined were from import shipments and taken at ports of entry. While it was found necessary to refuse entry to a few shipments, the general quality of these goods coming to Canada was greatly superior to that shown in previous years.

Oils (Edible Oils; Cottonseed, Corn, Olive, Peanut, Salad)

One hundred and eighty samples were examined. There is still some improper labelling owing to the confusion of the standards of measurement resulting in failure to distinguish between the American quart and the Imperial quart. Adulteration of Olive Oil with other oils is rarely encountered. Two shipments of salad oils containing undeclared cottonseed oil were permitted entry after proper marking.

Spices

Allspice: The twenty samples received were of fair quality.

Mustard: One hundred and fifty samples of mustard, compound mustard and prepared mustard were examined. While the quality of mustard and mustard compounds seemed fair, the labelling of prepared mustards presents a special problem still unsolved. An effort will be made to secure labelling such that the purchaser of these complex products shall have at least an opportunity of obtaining the information to which he is entitled when making a purchase.

Cassia and Cinnamon: Eleven samples were found free from adulteration.

Cloves: Eighty-three samples were collected and analyzed. Several samples of ground cloves were found to be adulterated with Allspice.

Ginger: Eighty-four samples were found to be of average quality, although insect infestation was observed in several importations of ginger root. Such shipments were refused entry.

Mace: Fifteen samples were examined and no adulteration noted.

Nutmegs: One hundred samples were examined. The nutmegs imported for grinding purposes were much better than those of previous years. This is the result of persistent inspection at ports of entry. Entry was refused to several shipments because of insect infestation and moulds.

Pepper: (Black, Cayenne and White). Considerable adulteration was found in black and white pepper. Undoubtedly the heavy importations of pepper shells are responsible for a great deal of this. Eight prosecutions were instituted with a view to preventing this objectionable practice. It is intended that this work shall be followed up next year.

Sugar (Granulated Sugar; Icing Sugar)

Fifty-nine samples were examined. Several importations of granulated sugar were held in customs until labelling was corrected with respect to statement of net content and declaration of colour. Icing sugar was found to contain less than the five per cent of starch allowed by the regulations.

Tea

There were no complaints as to the quality of tea as offered for sale. The twenty-nine samples examined represented import shipments of which one was damaged to some extent and held for proper grading and labelling.

Table Syrups and Molasses

Fifty-two samples were collected and analyzed. According to regulations, syrup sold as table syrup must be a sucrose product and glucose if present, must be declared on the label. The Maple Product Act requires that no maple flavour or flavour resembling maple may be present and the word "Maple" must not appear upon the label. One prosecution was necessary to secure compliance with these requirements.

Ice Cream

Three hundred and twenty-two samples were examined. Only eight samples had a fat content of less than 10 per cent. There was no evidence of the presence of fat other than milk fat.

Vinegar

Six prosecutions instituted during the year as the result of examining twenty-eight samples, were based on charges of adulteration and misbranding. One manufacturer persisted in the use of acetic acid. Misrepresentation of blended vinegars was also observed and corrected.

Drugs

Acetyl Salicylic Acid (Aspirin, Headache Powders, etc.): Thirty-two samples were obtained from the retail trade, and submitted for analysis. The acetyl salicylic acid found in the 5 grain tablets ranged between 4.84 grains and 5.03 grains. Free salicylic acid amounted to from 0.87 per cent to 1.2 per cent. Special investigation conducted in the Montreal laboratories proves conclusively that even in dry acetyl salicylic acid there is a slowly progressive decomposition with liberation of free salicylic acid.

Aconite (Tincture and Liniment): Fifty-eight samples of tincture of aconite and forty-seven of liniment of aconite examined in the Ottawa Labora-

tories will be made the subject of a special report. Although this drug is not so extensively used as it was a number of years ago, it is still stocked by druggists and should be of proper quality. Methods of assay are somewhat involved, partly because some authorities advocate biological methods of testing.

Chloroform Liniment: Of ten samples of chloroform liniment, three were found to be substandard.

Cinchona (Fluid Extract and Tincture): In a preliminary survey of the market in Cinchona preparations, the examination of twenty-eight samples showed 18 to be sub-standard. Warnings have been issued and the matter will be more completely investigated.

Camphor, Camphorated Oil, Camphorated Vaseline and Spirits of Camphor

Forty-two samples of these preparations were examined. There was one prosecution in connection with adulteration of spirits of camphor, because of the wilful use of methylated alcohol and deficiency of camphor.

Headache Remedies

Although many people know that the treatment of headache may be, in reality trifling with one symptom of a much more serious ailment, the hazard involved is not generally appreciated and it is still a common experience for a retail druggist to be asked to supply so-called "headache powders". A collection of these preparations purchased over retail counters in all inspection districts shows that acetyl salicylic acid is very commonly sold for this purpose. Next in order of frequency is acetanilide; phenacetine, caffeine and phenolphthalein are also used in these preparations. Immediate correction was ordered in certain preparations to which numbers had been assigned under the Proprietary and Patent Medicine Act. On some of these there was no label indication of acetanilide; in others the dose was greater than that specified by the Advisory Board. It is intended that this work be continued.

Hydrastis (Liquid Extract and Tincture)

Forty-three samples in all were examined and specially reported.

Hydrogen Peroxide

Thirty-nine samples were examined and with exceptions of two samples slightly low in available oxygen, were found to meet the requirements of either the British Pharmacopoeia or the United States Pharmacopoeia.

Nux Vomica (Fluid Extract, Tincture)

Forty-eight samples of fluid Extract and eighty-one samples of Tincture Nux Vomica were examined and have been made the subject of a special report.

Spirits of Nitrous Ether

Of twelve samples examined, the majority were found to be below standard. Very little progress seems to have been made by the trade towards improving the methods of storage of this unstable preparation.

Proprietary or Patent Medicines and Other Preparations Sold Under Distinctive Names

Twenty-seven samples of patent or proprietary medicines were examined, the advisability of such action being suggested by complaints or suspicion of the non-observance of requirements specified for use of schedule drugs or alcohol. No flagrant violations were found, although there was evidence of carelessness in the use of acetanilid as an ingredient of complex preparations.

Narcotic Drugs

Three hundred and twenty-eight samples of narcotic drugs were examined and in the majority of cases certificates were issued for prosecution. Although

the actual findings of the analysts were not controverted by the defence, great inconvenience was caused by disputes over minor technicalities such as the identity of the analyst. It is hoped that an amendment to the Food and Drugs Act, now being planned, will remove this difficulty.

Food and Drug Inspection

The twenty-six inspectors of food and drugs report a total of 108 prosecutions instituted during the year from the adulteration of the following articles of food: flavouring extracts, fruit juice, ice cream, maple sugar and syrup, meat and meat products, milk, pepper, soft drinks, table syrups and vinegar. There was but one prosecution of adulteration of drugs. There were twenty-six settlements by acceptance of voluntary payment of penalty for first offences as provided by section 19, of the Food and Drugs Act. Court convictions were registered in forty-eight cases, although but one of these received any more than casual notice in the newspapers. Eleven cases are still unfinished.

Penalties collected including fines, costs and analyses, amounted to \$5,665.51.

As the Food and Drugs Act does not make provision for making a really effective seizure, an amendment is proposed to give the Inspectors more authority to deal with such matters. There is also need for alteration of section 17, as there have been many misunderstandings of the procedure defined for bringing in the second or third parties where a retailer claims that he is not responsible for adulteration in defective goods sold in the same condition as they were when received by him.

Inspection of import shipments at ports of entry yields very satisfactory results in preventing the dumping and sale of defective foods such as: dried peaches with excess sulphurous acid; wormy and mouldy nutmegs; mouldy and wormy nuts; wormy ginger; coloured macaroni, meat and fish pastes; prohibited food colours; imitation butter flavouring; misbranded salad oils; fruit and vegetable products either partly decomposed or contaminated with spray residues.

Summing up the work of the Division in its entirety, the year has been one of advancement, and policies have been developed to ensure future progress.

NARCOTIC DIVISION

During the fiscal year just ended, there has continued to be a marked improvement in the narcotic drug situation. The licensing of all chemical manufacturers in Europe, the restriction of exports by foreign countries until a license has been received from the importing country, and the aggressive policy continued by the police authorities throughout the Dominion have all tended towards the improvement in our domestic condition which my department is satisfied has been attained. There is, however, a regrettable lack in most provinces of provincial legislation for the compulsory treatment of drug addicts and the maintenance of institutions for such treatment, which are an essential requisite in handling cases of that nature. The provision of such treatment is altogether a Provincial matter, similar to the care of insane, tubercular or V.D. patients, and it is felt that the filling of this lack is one of the important essentials before we can claim to be making headway in connection with our addicts other than by restricting their channels of supply. It has been amply demonstrated by those familiar with the cure of drug addiction that for the purpose of cure, absolute control of the addict is essential.

The volume of narcotics being smuggled into Canada through the underground channels has continued to be reduced in so far as the Atlantic seaboard is concerned, but there is still much to be done in coping with the smuggling from the Orient, which is so prevalent on the Pacific coast.

It will be noted that 743 persons, of whom 495 were Chinese, were convicted in the past year of offences under the Opium and Narcotic Drug Act, while 100 persons were deported under its provisions, of whom 89 were Chinamen. In all some 468 persons have been deported under this Act since that policy was inaugurated in 1922.

Among the 745 cases dealt with, the following give some idea as to the nature of the traffic it is our endeavour to control, although it is not in the public interest to disclose full particulars in every instance:

A. B. of Vancouver, B.C., was charged with illegal possession of narcotics, he having sent a trunk to a certain address, and later proceeded to that address, which trunk had just arrived off the *Empress of Canada*, and was found to contain tins and bricks of opium. The accused was found guilty, and sentenced to three years and a fine of \$500. An appeal was taken to the high court, and later an application for Habeas Corpus was made to the Supreme Court, but without success.

C. D. of Vancouver was charged with distributing narcotics, he, after lengthy investigations, having sold opium, morphine and cocaine to our officers, and the money paid therefor was found on his person. He was sentenced to two years, and to a fine of \$200.

E. F. of Vancouver, with five previous narcotic connections, was charged with possession of narcotics, and was sentenced to five years and a fine of \$200.

G. H. of Vancouver was seen entering an apartment house, and on being approached, threw away a parcel containing nine packages of morphine and seven of cocaine. He was sentenced to two years and a fine of \$300.

I. J., well known as a big man in connection with the smuggling of narcotics on the Pacific coast, had his premises raided, when a cache of fifty tins of opium was located. The man himself, however, had disappeared and was not located for over a year, when he was found guilty at the assizes, and sentenced to five years' imprisonment, and a fine of \$200. A tin of opium is worth \$50 to \$135, dependent upon the scarcity or otherwise in illicit circles.

Proceedings were instituted against a number of druggists who persisted in selling, without a doctor's prescription, a preparation called "Paveral", which contains one grain of morphine per fluid ounce, is prepared for the treatment of whooping cough, and is intended to be administered only under the direct supervision of a physician. This action was not taken until a circular had been sent to every retail druggist in the province concerned, advising them that it was against the law to sell Paveral without a doctor's prescription, and in addition the manufacturers were compelled to print a warning to that effect on all labels on bottles containing this preparation. The cases were dismissed on the ground that the sales had been made by the employees in the various drug stores without the knowledge of the proprietors, and as this ruling would have vitiated the working of the Act, an appeal was taken to the high court, where it was definitely decided that the druggist is criminally responsible for the acts of his employees, and some of the cases were referred back to the lower court to be tried on their merits. The department, however, having established its point, withdrew the charges when they came up in the lower court, and since then no trouble has been experienced.

The activities of the Narcotic Division were during the last six months of the fiscal year very largely concentrated on an effort, in conjunction with the United States authorities, to break up a ring which for some years had, with headquarters in Montreal, been heavily engaged in illicit traffic both to Canadian and United States points. No expense was spared in this investigation, and a large number of operatives were employed in watching, over a lengthy period, the activities of a considerable number of people. It was finally established that there was a steady and persistent traffic to Detroit by means of sleeping

car porters, and arrangements were made to establish their *modus operandi*, and particularly to get the "higher ups". As a result operatives succeeded in having both morphine and cocaine delivered to them in Detroit by a sleeping car porter, at a cost of over \$1,000, the deals being consummated under conditions which rendered the evidence sufficiently conclusive for subsequent use in court. A connection was then made with the "higher up" in Montreal, who, after two deals had been made through porters, agreed to a personal interview, after having received \$500 by telegram from our operative. In due course the interview took place in a room in a leading hotel in Montreal, with operatives listening and watching in adjoining rooms and across the hall. Our operative was subjected to a close questioning for over two hours before his bona fides were accepted, and finally a deal was arranged. After a thousand dollars had changed hands, our operative was, some time later, supplied by means of an intermediary in the employ of the "higher up", with two keys, one of which was for a locker in the Bonaventure Station in Montreal. Upon the locker being opened a suit case was found, which was unlocked by means of the second key, and found to contain the narcotics previously paid for.

A second interview was subsequently arranged in another hotel, under precisely the same conditions, and the bag in the locker, in this case also, was full of morphine, heroin, cocaine and bricks of opium previously paid for.

During the whole of this period, a large amount of shadowing of various people was being carried on, and as soon as the case was felt to be complete, simultaneous arrests were made, and in due course the "higher up" received a sentence of five years, and the intermediaries sentences of four and two years, and twelve months respectively. At the time of arrest, a considerable quantity of narcotics was seized, and shortly afterwards an office downtown was searched, when some 1,400 ounces and a large quantity of documents were seized, together with weighing scales, boxes, labels, etc.

The extent of their activities may be gauged from the fact that they had purchased over 51,000 ounce boxes to contain their supplies, and had recently ordered another 500, which indicated that the previous orders had been absorbed in their business. Immediately after the arrest of this gang, the price of cocaine in Detroit rose from \$22 to \$65 per ounce.

TABLE NO. 1—NUMBER OF CONVICTIONS OF OFFENCES UNDER THE OPIUM AND NARCOTIC DRUG ACT FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1926

(Note—Figures are not available for the fiscal year)

OFFENCES AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1926

| Provinces | Nature of Offence | | | | | | | | | | |
|-----------------------|---|------------------|---------|----------|-----|---------------------------|------------------|------------------------------|---------------------------------|-------------------------|-----------------------------|
| | Breach of Opium and Drug Act, not further defined | In Possession of | | | | Drugs not specified | Smoking Opium | Selling Narcotic Drugs | Dispensing Narcotic Drugs | Keeping Opium Den | Frequenting Opium Den |
| | | Opium | Cocaine | Morphine | | | | | | | |
| Nova Scotia..... | | 1 | | | | | | | | 1 | |
| Quebec..... | 2 | 16 | | | 157 | | | 24 | 1 | | 53 |
| Ontario..... | 16 | 19 | | 1 | 24 | | | | 2 | 4 | |
| Manitoba..... | 1 | 4 | | | | | | | | | |
| Saskatchewan..... | 1 | 3 | 1 | | 3 | | 1 | | | | |
| Alberta..... | | 4 | | | 3 | | 2 | | | | |
| British Columbia..... | 59 | 27 | 15 | 16 | 8 | | 146 | 4 | 2 | 7 | 115 |
| Totals of Canada..... | 79 | 74 | 16 | 17 | 195 | | 149 | 30 | 3 | 12 | 168 |

OFFENCES AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1926.

| Province | Total Convictions | | Sentence | | | Racial Origin | | | | | | | | | | Not Given |
|-----------------------|-------------------|--------|------------------|----------------------------------|-------------------|----------------------|---------|---------|--------|--------|---------|---------|---------|--------|-------|-----------|
| | Male | Female | Option of a fine | Committed to gaol without option | Sentence deferred | British and American | Chinese | Russian | French | German | Italian | Finnish | Swedish | Jewish | Negro | |
| Nova Scotia..... | 2 | ..... | 1 | 1 | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Quebec..... | 229 | 24 | 78 | 171 | 4 | 88 | 82 | 6 | 76 | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Ontario..... | 65 | 1 | 59 | 6 | 1 | 31 | 31 | ..... | 3 | 1 | ..... | ..... | ..... | ..... | ..... | ..... |
| Manitoba..... | 4 | 1 | 4 | 1 | ..... | 2 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Saskatchewan..... | 8 | 1 | 4 | 5 | ..... | 5 | 3 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Alberta..... | 9 | ..... | 1 | 8 | ..... | 3 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| British Columbia..... | 389 | 10 | 327 | 71 | 1 | 20 | 368 | ..... | ..... | ..... | 1 | 1 | 1 | 1 | 7 | ..... |
| Totals of Canada..... | 706 | 37 | 474 | 263 | 6 | 149 | 495 | 7 | 79 | 1 | 1 | 1 | 1 | 1 | 7 | 1 |

TABLE NO. 2

(a)—NUMBER OF IMPORT AND EXPORT LICENSES ISSUED DURING THE FISCAL YEAR ENDED MARCH 31, 1927

| | |
|----------------------|-----|
| Import licenses..... | 422 |
| Export licenses..... | 62 |

(b)—NUMBER OF WHOLESALE AND RETAIL DRUGGISTS' LICENSES ISSUED FOR THE CALENDAR YEAR 1927

| | |
|---------------------------|-----|
| Wholesale druggists'..... | 109 |
| Retail druggists'..... | 30 |

TABLE NO. 3—Amount of Narcotic drugs imported into Canada, under the licensing system which became effective during the year 1919, for the fiscal years ended March 31, 1919-1927 inclusive

| | Cocaine | Morphine | Crude Opium |
|-----------|---------|----------|-------------|
| | Ozs. | Ozs. | Lbs. |
| 1919..... | 12,333 | 30,087 | 34,262 |
| 1920..... | 6,968 | 28,198 | 13,626 |
| 1921..... | 3,310 | 12,214 | 2,953 |
| 1922..... | 2,952 | 8,774 | 1,700 |
| 1923..... | 3,330 | 10,998 | 1,373 |
| 1924..... | 1,561 | 7,092 | 845 |
| 1925..... | 1,589 | 7,424 | 655 |
| 1926..... | 2,633 | 8,651 | 810 |
| 1927..... | 2,659 | 8,873 | 1,020 |

NOTE.—Morphine includes Diacetylmorphine (Heroin).

In addition to the amount of narcotics imported by licensed dealers during the twelve months ended March 31, 1927, the following amounts of such drugs seized for infractions of the Opium and Narcotic Drug Act were disposed of by the Department of Health to those dealers. No disposal of drugs was made by the Department of National Revenue.

TABLE NO. 4

| Drug | Quantity | Total |
|-----------------------|----------|-----------------|
| Smoking opium..... | 189 tins | 65 lbs. 13 ozs. |
| Morphine muriate..... | 14 ozs. | 14 ozs. |

TABLE NO. 5—Summary of Narcotic Drugs exported from Canada during the fiscal year ended March 31st, 1927

| Kind of Drug | Destination | Quantity |
|--------------------------------|--------------------------|------------------|
| Cocaine..... | Newfoundland..... | 2 ozs. 42 grs. |
| *Cocaine..... | Germany..... | 24 ozs. 291 grs. |
| Cocaine..... | British West Indies..... | 11 ozs. |
| Morphine..... | Newfoundland..... | 9 ozs. 461 grs. |
| Morphine..... | England..... | 15 ozs. 145 grs. |
| Morphine..... | British West Indies..... | 4 ozs. |
| Powdered opium..... | Newfoundland..... | 1 oz. 370 grs. |
| Heroin (Diacetylmorphine)..... | Newfoundland..... | 1 oz. 120 grs. |
| Heroin (Diacetylmorphine)..... | England..... | 208½ grs. |

*Returned to Germany as this consignment was off colour, and rejected by the importer.

PREPARATIONS CONTAINING NARCOTIC DRUGS

| | | |
|--|-------------|---|
| Tincture of Opium (Newfoundland)..... | 64 ozs. | |
| Tincture of Camphor Compound (Newfoundland)..... | 400 ozs. | |
| Fluid Extract of Opium (Newfoundland)..... | 16 ozs. | |
| Asparoline (Newfoundland)..... | 352 ozs. | Each fluid ounce contains 1½ gr. Cannabis Indica. |
| Hypno-Bromic Compound (Newfoundland)..... | 664 ozs. | Each fluid ounce contains ¼ gr. Cannabis Indica and ⅜ gr. Morphine Acetate. |
| Syrup of White Pine and Tar (Newfoundland)..... | 1,360 ozs. | Each fluid ounce contains ⅜ gr. Morphine. |
| Syrup of White Pine and Ammon. Mur (Newfoundland)..... | 400 ozs. | Each fluid ounce contains ⅜ gr. Morphine Acetate. |
| Elixir Heroin and Terpin-Hydrate (Newfoundland)..... | 4,320 ozs. | Each fluid ounce contains ⅓ gr. of Heroin. |
| Creo-Terpin Compound (Newfoundland)..... | 12,560 ozs. | Each fluid ounce contains ⅜ gr. of Heroin. |
| Creo-Mur (Newfoundland) | 1,392 ozs. | Each fluid ounce contains ⅓ gr. of Heroin. |
| Creosote Compound (Newfoundland)..... | 480 ozs. | Each fluid ounce contains ⅓ gr. of Heroin. |
| Ichthy-Tannic Suppositories (Newfoundland)..... | 1,180 | 1 gr. |
| C. T. Dovers' Powders (Newfoundland)..... | 6,700 | 5 gr. |
| Syrup White Pine Eucalyptol and Honey (Newfoundland).... | 1,520 ozs. | Each fluid ounce contains 80 mins. Tincture of Camphor Compound. |
| Bronchial Sedative (Newfoundland)..... | 160 ozs. | Each fluid ounce contains 4 mins. Tincture of Camphor Compound. |
| F. E. Balsam Tranquileo (Buenos Ayres)..... | 1,200 ozs. | Containing 5 ozs. 373 grains of Morphine Sulphate. |
| Syrup Cocillano Compound (Buenos Ayres)..... | 11,520 ozs. | Containing 3 ozs. 128 grs. Heroin. |
| P. E. Opium (Buenos Ayres)..... | | 5 lbs. 10 ounces. |
| F. E. Opium Concentrated (Buenos Ayres)..... | | 23 lbs. 5 ozs. 146 grs. |
| G. C. Pills Antisyphilitic (Buenos Ayres)..... | 7,000 | Containing 4 ozs. 410 grs. Pdr. Opii. |
| G. C. Pills Antidysenteric (Buenos Ayres)..... | 7,000 | 2 ozs. 125 grs. Pdr. Opii. |
| C. T. Special Prescription (Buenos Ayres)..... | 7,000 | Containing 4 ozs. 410 grs. Pdr. Opii. |

TABLE No. 6—Number of Aliens deported from Canada having been convicted of offences under the Opium and Narcotic Drug Act, as from June 28, 1922 (the date on which the amendment came into force), to January 1, 1927.

| | |
|-----------------------------|-----|
| Chinese | 370 |
| United States Citizens..... | 81 |
| French | 3 |
| English | 2 |
| Greek | 2 |
| Czecho-Slovak | 1 |
| Italian | 5 |
| Japanese | 1 |
| Irish | 1 |
| Roumanian | 1 |
| Philippino | 1 |
| Total | 468 |

TABLE No. 7—Amount of Narcotic Drugs seized or removed from illicit channels during the fiscal year ended March 31, 1927.

Opium—

| | | | |
|--|----------|---------|----------|
| Opium, crude | 32 lbs. | 7 ozs. | 156 grs. |
| Opium, smoking | 37 lbs. | 8 ozs. | 469 grs. |
| Opium seconds (Yen-She)..... | 5 lbs. | 6 ozs. | 197 grs. |
| 475 tins of Smoking Opium containing..... | 237 lbs. | 8 ozs. | |
| 16 tins of Smoking Opium (1 oz.) containing..... | 1 lb. | | |
| 60 jars of Smoking Opium (1 oz.) containing..... | 3 lbs. | 12 ozs. | |
| 28 Bricks of Smoking Opium..... | 28 lbs. | | |
| *Decks of Opium..... | 611 | | |
| Decks of Yen-She (Seconds) | 77 | | |
| Pills of Opium..... | 45 | | |

Morphine—

| | | | |
|--------------------------|----------|----------|----------|
| Morphine | | 963 ozs. | 200 grs. |
| *Decks of Morphine..... | 25 | | |
| Cubes of Morphine..... | 16 | | |
| Tablets of Morphine..... | 1,622 | | |
| Morphine Paste | 150 lbs. | | |

Cocaine—

| | | | |
|-------------------------|-----|----------|----------|
| Cocaine | | 196 ozs. | 105 grs. |
| *Decks of Cocaine..... | 239 | | |
| Tablets of Cocaine..... | 18 | | |

Heroin (Diacetylmorphine)—

| | | | |
|------------------------|-----|---------|--|
| Heroin | | 27 ozs. | |
| *Decks of Heroin..... | 12 | | |
| Tablets of Heroin..... | 101 | | |

Alleged Drugs (Miscellaneous) including Morphine, Cocaine and Heroin—

| | | | |
|------------------------|-----|---------|----------|
| Drugs (alleged) | | 41 ozs. | 308 grs. |
| *Decks of Drugs..... | 526 | | |
| Capsules of Drugs..... | 131 | | |

*Deck is a small package containing from three to five grains of drugs.

Paraphernalia—

| | | | |
|-----------------------------|-----|--|--|
| Opium lamps | 94 | | |
| Opium lamp globes..... | 30 | | |
| Opium smoking pipes..... | 115 | | |
| Opium Scales (Chinese)..... | 37 | | |
| Opium pipe bowls..... | 18 | | |
| Scrapers pipe | 98 | | |
| Opium tins, empty..... | 327 | | |

PROPRIETARY OR PATENT MEDICINE DIVISION

Medicinal preparations to the number of 774 were presented for registration under the Proprietary or Patent Medicine Act during the fiscal year ended March 31, 1927; 602 were assigned registration numbers and 172 rejected for various valid reasons.

Special attention was directed to advertisements in newspapers and circulars used for registered medicines with a view to having eliminated such claims and representations as are, in the light of medical science, manifestly grossly exaggerated and incapable of fulfilment. Section 7 (f) of the Act referred to, prohibits the sale of any medicine fraudulently advertised or recommended and, as the Food and Drugs Act was amended at the last session of Parliament so as to approximate this provision, it is hoped that, in future, a greater change will be noticeable in advertisements for all non-pharmacopoeial medicinal preparations placed on the Canadian market intended for use by the public.

Remedies designed for the treatment of diabetes, pneumonia and appendicitis have been placed in the class of non-registerable medicines, inasmuch as competent medical authorities hold that the sale of proprietary medicines for these purposes and directed for administration by the laity without skilled supervision is misleading in that the use of such articles may cause patients to delay specific treatment until serious conditions have developed.

Analyses show that registered medicines are generally manufactured according to the conditions and claims upon which registration was granted. The exception is where alcohol is present in considerable volume and the omission of some denaturing ingredient will permit of the preparation being used for beverage purposes. However this practice is very little in evidence as it has been the policy of the Department to promptly penalize manufacturers who alter the formula of their medicines without authority.

The majority of proprietaries sold in Canada containing potent drugs named in the schedule of the Act have been found, on examination, to be correctly labelled with the proper proportions of such drugs per maximum dose, approved directions and other information necessary to meet the requirements of the Act. Medicinal preparations which do not bear the name of any potent drug on the labels and wrappers and carry a registration number and the words "The proprietary or Patent Medicine Act" are regarded as being incapable of causing any grave harm when manufactured in accordance with the terms of registration and taken as directed.

The Act was intended to provide the layman with medicines which he might take with safety according to directions given. The department endeavours to see that this principle is carried out, but as to the therapeutic value of a medicine to the consumer, no guarantee can be given as there are numerous uncontrollable circumstances which may effect the choice and use of medicines. Ordinarily, preparations represented as liniments, tonics and ointments, when found on the market, are properly classified as such. Registered remedies recommended for particular ailments, if manufactured correctly, should be found to contain ingredients generally recognized in standard works on drugs to be used in the treatment of the affection for which they are recommended, but the value of such preparations is what the consumer finds them worth.

As a consequence of not meeting the requirements of the Act, the goods of twenty-two manufacturers were seized during the period under review.

POLLUTION OF THE INLAND WATERS OF CANADA

The problem under discussion is of great importance to Canada and the United States. The peoples of both countries possess, in the splendid immensity of the series of waterways, a heritage of inestimable value. Millions of persons dwell in their watersheds. Along the banks of the Great Lakes and communicating rivers communities which a few years since were but villages are now in population, in social and industrial development, among the most important on the continent. The world possesses no other water thoroughfare comparable with the highway leading from the gulf of St. Lawrence to the head of lake Superior. Some idea of the magnitude of commerce on these waters may be gleaned from the vessel passages through the Sault Ste. Marie canals, the Detroit river and the St. Lawrence canal system.

The hundreds of summer resorts along the St. Lawrence river and the Great Lakes, and their connecting waterways, as well as in that splendid chain of boundary waters still farther west, afford unexcelled opportunities for rest, recreation, and pleasure, which are taken advantage of by a very large floating population during the summer months.

The directness of the water route from the Atlantic Ocean to the head of lake Superior, the adaptation to water carriage of the freight borne by the lake vessels, and the low cost at which this freight can be transported by them, the completion of the Welland and other canals along the boundary rivers permitting the passage of vessels of 28 or 29 feet depth from the ocean to the heart of the continent, the intensive settlement of the great wheat belt of Canada, of which only the fringe has yet been touched, render the conclusion inevitable that the shipping and commerce on these waters and the wealth, the industries, and the population along their banks must in the near future reach dimensions far exceeding their present attainment, and may ultimately far surpass any area of similar extent in the world. In working out the enormous possibilities of this vast section of the continent the proper observance of international sanitary requirements will be a most essential factor.

Pollution of the inland waters of Canada is from two sources: first, the so-called shore pollution or washings of the land surface during and after heavy rainstorms; and, second, from the sewage discharged from the municipalities bordering on the lakes and from the great numbers of vessels that traverse the inland waters. It is estimated that the Great Lakes system receives the sewage of a population of upwards of 10,000,000 people—i.e., those that live in the various communities on the near side of the height of land that surrounds the Great Lakes area. The discharge of sewage from vessels seriously pollutes the waters in the lanes of vessel travel. Especially does vessel pollution menace the water supplies of the municipalities situated along the St. Marys river, St. Clair and Detroit rivers, and the Welland and St. Lawrence canals.

Lake Erie and its tributaries provide water for domestic and industrial uses and for fire protection to at least twenty-five cities in the United States and a dozen communities in Canada. The total population thus provided is estimated at about 4,000,000. Less than twenty years ago, water was used by the population on the shores of the lake in its natural state for many purposes. Now, as a result of the growth of population, of industry and commerce and shipping, it is treated by artificial process by many cities and towns. Lake Erie is stated to be the natural drainage body for 25,000 square miles of territory. With its tributaries, it serves as the natural receptacle for the domestic sewage and trade wastes of a population in excess of four million. For many

years this dual use of the lake by advancing civilization presented no serious problem. To-day the resulting problems are numerous. Rapidly advancing pollution now affects

- (1) the lake as a source of public water supply;
- (2) the sanitary condition of public and private bathing beaches;
- (3) the fishing industry;
- (4) property values of lands adjoining the lake shores.

Less attention has been given to prevention of pollution by trade wastes and domestic sewage and to its control than to purification of the water after pollution. Practically nothing, taking the territory as a whole, is being done by way of sewage purification on lake Erie and not much more in the matter of sewage treatment. The extension of water works intakes farther and farther out from shore corresponds with the encroachment of sewage pollution upon the water supply. The report of the International Joint Commission on the pollution of the boundary waters was very definite in its statement of the conditions found to exist. Since then there has been an increase of population on the waters and tributaries of lake Erie but the prevention and control of sewage pollution has not been developed to any great extent.

Under the provisions of the "Navigable Waters Protection Act" (R.S.C., chap. 115) when any municipality proposes to build a sewer having its discharge into the navigable waters of Canada an official application with a description of the site and plan must be filed with the Department of Public Works at Ottawa, for approval of the said site and plans, and for permission to construct the outlet sewer.

An examination of the map of the world discloses the fact that the Great Lakes system of North America, including the St. Lawrence river, constitutes an outstanding and unique geographical feature, such that many persons have drawn attention to phenomenal characteristics appertaining to these waters.

The Great Lakes constitute the most important bodies of fresh water in the world, considered both from the standpoint of their area and the extent of their commerce. With their connecting channels they afford access to a region notable for the magnitude of its mineral, agricultural, and industrial resources. They have permitted the grain of the Western States and Canadian provinces to reach eastern mills and ports of export at substantial savings as compared with all-rail routes. The total area included within the watershed of the Great Lakes system to the foot of lake Ontario is, in round numbers, about 300,000 square miles.

The Great Lakes are owned by the two countries equally, except lake Michigan. The St. Lawrence for one hundred miles is an international stream, under equal ownership.

The Great Lakes system forms one of the world's greatest highways for water-borne transportation, the greater part of this commerce being carried in a special type of vessel known as the bulk freighter which has been developed to meet the conditions of the lake trade. These vessels are from 250 to 625 feet in length and have a carrying capacity of from 3,000 to 15,000 short tons. They are the most economical carriers in the world. The history of the development of the Great Lakes carriers is relatively short. Beginning with the bateau of the voyageur, and followed by the sailing vessels of a few tons, the size has steadily increased to its present dimensions.

The Great Lakes along the boundary between Canada and the United States, from Minnesota to New York, carry an enormous traffic equivalent to over twenty-three per cent of the ton-mileage of all of the railroads of the United States. The total traffic on all Canadian canals during 1926 amounted to 13,477,663 tons.

The magnitude of water borne traffic on the Great Lakes is shown in statements prepared by the bureau of research, United States shipping board, indicating that more than 210,300,000 cargo tons of freight were handled through Great Lakes ports in 1925, an increase of 31,000,000 tons, or 11.8 per cent over the total of the previous year.

Statistics of the Canadian and American vessels trading on rivers and lakes between Canada and the United States exclusive of ferriage show for the season of navigation of 1924 a grand total of 101,069 vessel arrivals and departures in this traffic. The total number of persons engaged as crews for these vessel passages amounted to 1,192,294.

Although the Inland Waters of Canada are defined by the Dominion Statutes as "*All the rivers, lakes and other navigable waters within Canada, except saltwater bays and gulfs on the seacoast, and includes the river St. Lawrence as far seaward as a line drawn from Father Point, on the south shore, to Point Orient, on the north shore;*" and the "*Minor waters of Canada*" are similarly defined as "*All inland waters of Canada other than lakes Ontario, Erie, Huron including Georgian bay, and lakes Superior and Winnipeg,* and includes all bays, inlets and harbours of or on the said lakes and bay", and the Order in Council (P.C. 1091) entitled "Regulations concerning water for drinking and culinary purposes on vessels navigating on the Great Lakes and Inland Waters" was approved the 19th of June, 1923, up to date it has been only possible to attempt to enforce these regulations in that portion of the St. Lawrence river and Great Lakes system that lies between Montreal on the east and Fort William to the west, although there is a very considerable number of passenger steamships operated in traffic on those portions of the inland waters that lie to the east of Montreal, including the international waters of the Richileau-lake Champlain district as well as on the inland waters in the other provinces, viz. Quebec, Manitoba, Saskatchewan, Alberta, and British Columbia. Thus no serious attention has been given to the large number of passenger steamships that sail between Montreal and the gulf of St. Lawrence, although many of these vessels are of large size. Of these the ss. *Northland* has accomodation for 204 passengers on long trips that usually take several days. That in the near future much more attention should be paid to the quality of the drinking and culinary water available aboard vessels engaged in this traffic is indicated in a report giving analyses finding on samples of water that were collected from the drinking and culinary water systems of certain passenger steamships that plied these waters during the season of navigation of 1926. The period of observation was from July 2 to October 21. The annexed table gives some idea of the contamination of the drinking water available for the use of the passengers and crews aboard the passenger vessels.

| Steamship | Number of occasions on which samples were collected | Number of occasions when analysis showed the presence of colon bacilli contrary to the Regulations |
|---------------------|---|--|
| Montreal..... | 21 | 12 |
| Quebec..... | 18 | 15 |
| Richileau..... | 10 | 3 |
| Saguenay..... | 20 | 16 |
| Turbinia..... | 7 | 4 |
| Cape Eternity..... | 7 | 6 |
| Rapids Prince..... | 10 | 6 |
| Rapids Queen..... | 7 | 3 |
| Three Rivers..... | 12 | 10 |
| Louis Phillipe..... | 13 | 13 |

It has not been possible, as yet, to extend the application of the regulations concerning water for drinking and culinary purposes to vessels plying on lake Winnipeg, one of the largest of the lakes of this continent and one of the Great Lakes so defined by Dominion statute. The largest passenger steamship, the *Keenora* that plies lake Winnipeg waters is of steel construction and has accommodation for one hundred cabin passengers on a round trip 700 miles in extent. Other steamships, viz., the *Wolverine*, *Grand Rapids*, etc., are engaged in mixed passenger and freight carrying trade.

There are also a number of fair-sized passenger steamships on certain other important inland waters of the Prairie Provinces and British Columbia on which it has not been possible to give the attention to the quality of the drinking and culinary water that appears to be desirable.

Work on this problem was carried on throughout January and February, 1927, through the medium of a series of lectures that were given at the Schools of Navigation and Marine Engineering at various ports on the Great Lakes system. In this manner it was possible to get into contact with the coming generation of ships' masters and engineers under the best circumstances and at a time when questions could be asked and answered. The actual field work commenced in March, 1926, and was carried on until the close of November. The data for the report submitted has been gathered throughout this period.

During the season of 1926, 1,273 routine visits to Great Lakes' vessels were made by health officials, this total including certain examinations of steamship water supply systems which were carried out in response to special requests by steamship operators.

Throughout the season very considerable progress has been made by certain of the steamship companies in bringing the water supply systems of the various vessels operated by these organizations into line with the requirements of the regulations.

In addition to the physical examination of water supply systems installed on various steamships, information and advice of a technical nature and copies of reports showing the quality of water supplies were supplied to navigation companies. Plans of proposed water supply systems for new steamships in course of construction, on being submitted for the approval of this office were checked.

Correspondence and interviews with health and navigation officials and other persons concerned were carried on regarding the certification of water supplies available at various ports. In this connection visits have been made to nearly all of the Canadian ports on the Great Lakes system to study in detail the facilities available for the supply of drinking and culinary water from certified shore sources.

Owen Sound may now be added to the list of ports at which water supplies of approved quality may be obtained by vessels that trade into that harbour.

Considerable co-operative work was carried on with the representatives of the United States Public Health Service who are engaged in similar work.

During the season the provincial laboratory at Sault Ste. Marie, Ont., analysed 783 water samples from United States steamships.

In the seasonal report of Inspector Whimster of the United States Public Health Service, he makes the following statement: "The Canadian Department of Health deserves commendation on the extent of its co-operation during 1926. Through the facilities extended in the use of the branch laboratory of the Ontario Department of Health, located at Sault Ste. Marie, Ont., a very valuable phase of the work at this port has been increased. Dr. Nelson Graham deserves much credit for the interest he has taken in the collection and analysis of water samples from American and Canadian vessels. It is hoped that during the coming season a more reasonable balance of co-operation may be effected."

Throughout the season steamship companies operating vessels in Great Lakes' traffic have been supplied, regularly with copies of water analyses reports and wherever it seemed advisable, attention of the management of these organizations was drawn to flagrant carelessness or violation of the regulations.

Traffic on the Great Lakes has not been limited entirely to traffic between Canada and the United States ports, or port to port traffic in the United States and in Canada. Before and since the war tramp vessels entered the St. Lawrence river carrying heavy cargoes as far as Montreal, where a portion was unloaded, and then went on to upper lake ports via the various canals, whose depths were not more than 14 feet. Tramp vessels have carried merchandise from the lake ports and have taken on the remainder of their cargo at Montreal so that the entire cargo space of the vessel might be used during the remainder of the voyage. During the season of navigation of 1926 a total of 147 vessels entered the Great Lakes from outside seaports. Of this number 85 were purchased by Henry Ford from the United States Shipping Board. Several Norwegian vessels entered more than once.

The magnitude of the commerce through the ship channels of the Great Lakes and the St. Lawrence river may be gauged by comparing it with other great commercial routes. At Sault Ste. Marie, from 70,000,000 to 90,000,000 tons a year; through Detroit river, 80,000,000 to 100,000,000 tons; through the St. Lawrence canals, 4,000,000 to 5,000,000 tons. The Suez canal has carried 20,000,000 tons, while the Panama canal last year carried 25,000,000 tons.

Total traffic to the end of November, 1926, through the Canadian and United States locks at Sault Ste. Marie aggregated 84,294,866 tons, an increase of 4,259,957 tons over the similar period of 1925.

The number of passengers carried for the period mentioned was 52,757.

A statement of traffic via the Welland canal for the season of 1926 shows a total of 5,640,298 tons carried in 5,866 vessel passages, being an increase of 505 vessel passages and 364,238 tons of freight.

Returns for the port of Toronto shows that a total of 4,690 steamships, propellers, tugs and sail and tow vessels were listed as arrivals and departures at this lake harbour for 1925 season of navigation.

The increase of traffic in the lower lakes and the St. Lawrence river is indicated by the statistics of grain carriers in the period 1923 to 1925. In 1923, grain was carried to Montreal in 1,147 lake vessels; in 1924, grain was carried to Montreal in 1,606 vessels. While by 1925 the number of vessel passages by grain carriers to this port from points on the Great Lakes system reached the total of 1,637. During the season of 1926 the number of vessel passages through the St. Lawrence canals was 13,528.

Certain vessels engaged in passenger traffic to lake and river ports handled 122,201 passengers via Victoria pier wharves in the season of 1925, but in addition to these steamships there is a considerable fleet of smaller vessels plying in and out of Montreal for which no information is available at the present time.

The total shipping using the port of Montreal during 1926 set up a new record. *The total number of ships entering was 7618 of which 6,197 were from inland waters.* An increase of 240 more from the inland waters than the previous high record of the year 1925. There was an increase of 148, however, in the recorded figures representing the number of ships trading from Montreal to lower ports in the St. Lawrence river.

An official report for the harbour of Three Rivers, P.Q., 1925, shows 1,612 steamboats, barges and tugs engaged in inland traffic leaving passed through this port in addition to 159 canal boats and barges engaged in traffic to points in the United States as well as 81 other vessels of various nationalities engaged in Ocean traffic.

The record of arrivals and departures of vessels at the port of Quebec for 1926 shows a total of 231 coasting vessels as having arrived from Montreal and the Great Lakes, in addition to 299 coasting vessels that arrived at Quebec from lower St. Lawrence points and seawards.

Although programs of extensive shipbuilding in lake yards have been carried out since the peak of 1917, none parallels the completed program of 1925. During 1925 eleven steamships were built in England for the Canadian grain trade.

To keep within reasonable pace of constantly diminishing water levels which have cut deeply into the carrying capacity of the fleet of ore, coal, grain and stone carriers, it has been necessary for both Canadian and American ship-owners to materially add to their vessel property. Enormous as the shipbuilding program of 1925 proved to be lake and foreign yards made very considerable additions to the Great Lakes fleet in 1926. Six steamships of Welland canal size were constructed in England for the Eastern Steamship Company of Canada. Two motor ships were added to the fleet of the United States Steel Products Company to be operated in specialized lake trade, and three notable additions to the Canadian fleet were launched at the Midland shipyard.

During the last five years sixty-one steamships have been added by the Canada Steamships Line to the fleet operated by this organization on the Great Lakes and inland waters of Canada. So that this fleet now consists of one hundred and fifteen steamships, of which ninety-two are freight and twenty-three are passenger steamships. During the year 1926 this company completed and put into service two new package freighters and authorized the construction of four additional steamships of the same class, of which two are partially constructed and will be placed in commission about May 1, 1927, to be followed by the other two about July 15, 1927. In the same year this company lost one passenger steamship by fire and authorized the construction of three large modern-type passenger steamships, of which one is partially constructed.

Rapid progress in the building up of a fleet of vessels has been made by the Eastern Steamship Company of Port Colborne, which now operates twenty-one steamships. While the Paterson Steamships Limited of Fort William has grown from an organization that operated four steamships to one of fifteen freight carriers.

A new feature is the operation, by the Frank Lane Line of New York, of a number of steamships between such ports on the Great Lakes as Detroit, Cleveland, Hamilton and Toronto, and European points. This service is not entirely an experiment as experimental voyages were made last year by vessels that delivered steel rails to the Ford motor works at Detroit. It is stated that the Lane Company expect to have fifty vessels in this service within five years.

Additions have also been made to the fleets owned by such vessel operators as the Superior Paper Company, John Tackaberry of Lion's Head and the Carnegies of Kingston, etc. The Clarke Steamship Company have increased their fleet serving the north and south shores of the St. Lawrence river and started a service to Newfoundland.

At the present time one British shipbuilding firm has a contract to construct no less than ten grain carriers for operation on the Great Lakes.

A complication of the problem arises with the change of ownership and change of name of Great Lakes steamships. Of the seventy-nine freight carriers that were sold during 1926, fifty-nine were Canadian transactions. Altogether ninety-four lake steamships changed ownership in 1926 and forty-four underwent change of name.

During the season of 1926 an attempt to handle as large a number as possible of the vessels that pass through the canal at Sault Ste. Marie, Michigan,

during the hours from 9 a.m. to 5 p.m. received the attention of two and frequently three persons. The only attention given to vessels passing through the Canadian canal was the presence of a busy official of the Department of Health of Ontario for a few hours each week, all the time that he could spare, so that only a minor check could be kept on the water supplies of Canadian passenger steamships.

To be able to give the constant attention desirable to ensure that vessel water supplies will be maintained at the standard of the Regulations additional assistance and funds will be required.

While there has been a decided improvement in the quality of the water supplied for drinking and culinary purposes aboard a considerable number of the Canadian vessels on the Great Lakes, the constant attention of the persons responsible will be necessary in order that water supplies of standard quality may be always available.

Throughout past seasons a large number of analyses of drinking water from passenger vessels that attempt to treat lake water aboard ship have shown polluted water. Subsequent inspections have disclosed unsatisfactory treatment, either through carelessness or inexperience on the part of the vessel engineers. In view of the satisfaction obtained when the drinking water was taken from approved shore supplies and the fact that this method is simpler and more economical in the long run than water treatment aboard vessels, it is proposed in future to more strongly advocate the use of water from certified shore sources for drinking and culinary purposes aboard ship.

As a result of the slackness exhibited by the agent in Montreal for the Norwegian steamships that ply throughout the season of navigation into ports in both the United States and Canada on the Great Lakes system, a visit was made in company with the representative of the United States Public Health Service to the office of the Norwegian agent so that that organization could definitely understand the penalties that would be imposed by the United States authorities in the event of vessels of foreign nationality entering ports in the United States without the proper sanitary arrangements required by the Interstate quarantine regulations.

The congestion of shipping that takes place at times in the Great Lakes ports is illustrated by the accompanying photographs. The water in the harbours is not only contaminated by the discharge of sewage from the adjacent municipalities, but it is also subjected to the additional contamination caused by the discharge of sewage, etc., from the assembled steamships.

Thus upwards of fifty steamships spent the winter at Fort William. Sixty-five or more sheltered in the waters adjacent to Midland and Port McNicoll. Forty-eight steamships were tied up at Port Colborne during the winter of 1925-26. Twenty-five were counted in Toronto harbour and forty-one at the port of Kingston. In the harbour of Montreal as many as fifty-four lake vessels were in port at one time last season while for the last six weeks prior to the end of November there were hardly ever less than thirty-five waiting at one time.

The opportunities for contaminating the drinking water aboard lake carriers are as follows:—

1. Contamination of sea cock or suction pipe while vessels are lying in polluted water, due to faulty setting of valves, failure to close valves, or the use of the general service pump.

2. Since in most of the vessels the engine room and sea-cocks are aft of amid-ship and since there is usually more or less sewage discharged from toilets in the forward portion of the ship, it is possible that some of the fecal matter discharged from these toilets is sucked in through the sea cock.

3. Accidental or intentional taking of water supplies near shore or in unsafe waters. This situation is aggravated by the fact that the engine room personnel cannot tell at all times exactly the ship's position; also by the fact that many ship captains and engineers are not familiar with all of the areas where it is unsafe to take water. There is also the possibility that engine room employees may forget to close the seacock as the vessel approaches a polluted harbour.

4. There is also more or less possibility of picking up sewage in the wake of other vessels, as for example where one vessel is towing another. That this method of contamination is a real one has been brought out by testimony before the International Joint Commission. And even if the duty of collecting drinking water is performed with vigilance, such care can be nullified by leaky valves.

The greatest opportunity for the contamination of the drinking water supply occurs when the tanks are filled by the general service pump. It is a common practice to use the general service pump in port for washing down decks, and upon leaving port for "shooting" ashes, after which the drinking water tanks are filled, the idea being that during the time taken for "shooting" ashes the sea cock, suction pipe, and manifold are thoroughly cleansed by the force of this flushing. Owing to the large size of the suction pipe, its length and number of bends, it is obvious that there is a considerable opportunity for polluting matter to remain in this pipe, even after running the pump in clean water for some time.

With any of the approved methods of water purification it is imperative that the equipment be of sufficient size to meet the maximum load that may be put upon it.

While the provision and maintenance of a pure and adequate public water supply is nowadays recognized as a necessity in any modern community, the fact is less widely appreciated that, if a public water supply is contaminated or open to contamination, it may constitute a grave menace to the health and well-being of the persons supplied.

At the close of navigation in the latter part of the year, and in preparation for the spring reopening of navigation there are two periods, varying from two weeks to a month or so, when the ships' engines and fittings, etc., are being checked over, during which the services of a considerable number of men are retained around Great Lakes vessels. During these periods conditions relative to the collection and handling of the drinking and culinary water supplies should be scrutinized as the vessels are usually in polluted harbour waters and not infrequently the vessel water purification apparatus is shut down. Under such circumstances water for drinking and culinary purposes should be obtained only from certified shore sources.

Experience indicates that provision should be made for ten gallons of water per day for each passenger on a passenger vessel, particularly when running water is provided in staterooms and also where bathing facilities are provided.

The national and international interest of the citizens of the Dominion of Canada and the United States in the question of water supplies of standard quality aboard vessels plying the inland waters of Canada is well illustrated in the outbreak of typhoid fever among the crew of the ss. *Lake Gaither*. This steamship although of United States register was manned by a crew in which Canadian citizens composed about one-third of the number.

In the latter part of October there was an outbreak of diarrhoea and typhoid fever among the crew of the steamship *Lake Gaither* so severe that in making the trip from Detroit to Montreal it was necessary to remove three typhoid patients from the ship on her arrival at Toronto and five others were treated for typhoid fever after this steamship arrived at Montreal, one died subsequently. All other members of the crew were required to report at the Montreal General Hospital for anti-typhoid inoculation and it became necessary

to investigate the matter in co-operation with the representatives of the United States Public Health Service at Montreal and Chicago. This epidemic is but another illustration of the necessity for a continued check on vessel water supplies.

Because typhoid fever is spread principally by contamination—by sewage that gets into the water, it is an ever present danger.

A low rate of typhoid fever cases or deaths is probably the best index of efficient community sanitation.

Typhoid fever has been termed a disease of defective civilization. Many years ago it was recognized that every case of typhoid fever was the result of somebody's ignorance or neglect. The control of typhoid has always been primarily an objective of sanitation, which is itself a product of civilization. In modern communities recovered patients are not permitted to engage in any occupation involving food handling until medical examinations have shown such persons to be free from typhoid infection.

Just how typhoid fever can be controlled on board ship is well illustrated in the British Navy. During the ten-year period 1900-1909, the average yearly incidence of the enterica group was 2 per 1,000; in 1922 the incidence was 0.33 per 1,000. These figures indicate the value of the preventive measures employed in the navy. In lectures the nature of enteric fever is explained and measures required for its prevention indicated. The men are warned of the risks which they run in drinking polluted waters either natural or bottled (aerated), or eating raw vegetables such as those commonly used in salads. They are told also how oysters and other shellfish may cause the disease. The role of flies in the spread of the disease, and the importance of protecting food against contamination by these insects, are explained.

Every care is taken to ensure that no suspicious or polluted waters are received into ship's storage tanks, and, as an additional precaution against any accidental pollution which may arise during transport, all water for drinking and cooking purposes taken on board from the shore is chlorinated by the addition of thirty grains stabilized mixture of bleaching powder to every 100 gallons of water.

All fresh milk which is used in H.M. ships and establishments, unless the source is well known, under supervision, and above suspicion, is sterilized, and tested as required in order to see that this procedure is carried out.

Many outbreaks of enteric have been caused by vegetables such as lettuce and other greenstuffs eaten in the raw state in the form of salads. Owing to the great difficulty of ensuring thorough cleansing of these articles of food, special precautions are taken regarding their use on board ship, their use being prohibited whenever the slightest doubt exists as to their freedom from infection. Tomatoes and other ground vegetables and fruits which are eaten tinned and in a raw state are carefully supervised especially when obtained at ports where enteric is prevalent or sanitary conditions unsatisfactory.

All food is protected as far as possible against flies and other insects.

Strict regulations are in force regarding the medical inspection of all ratings that handle food and drink and of men engaged in cleaning drinking water tanks. Similar regulations are enforced by the United States Public Health Service regarding food handlers and other persons employed on vessels engaged in navigation on the Great Lakes and interstate traffic. The medical history of men engaged in domestic service or handling food, cleaning drinking water tanks, making mineral waters, or serving in the canteen is carefully inquired into.

Measures are taken to isolate and eliminate typhoid carriers.

Other regulations in force require that "all officers appointed to and all men detailed for service in the Mediterranean, East Indies or China stations are to be inoculated against typhoid and paratyphoid before leaving England."

The season of navigation of 1926 was marked by peculiar ice conditions. At the opening ice was serious, and in lake Erie occasioned much difficulty and delay. The Welland canal was not opened until the first of May. At the close of the season an unprecedented blockage took place in the St. Mary river, and an immense fleet of vessels bound in both directions was frozen in. Only the most strenuous efforts with all available ice-breaking craft succeeded in opening channels and releasing the imprisoned ships. The last vessel passage of the season on the Welland canal was made on December 16.

A concrete example of the value of a supply of pure water is given by the improvement of conditions at the Government elevator at Port Colborne. Here it was quite a usual matter for many of the workmen to lose considerable time each year due to the annual outbreaks of so-called summer sickness, during the hot weather. As there was no water supply system it had been the usual custom to fill the drinking water pails by dipping out of the harbour which is subjected to severe contamination.

For the past three seasons however the drinking water has been carried in covered containers from the filtered and chlorinated supply of the municipality of Port Colborne with the result that there has been no more summer sickness or lost time for the employees of the Government elevator.

The responsibility of transportation companies that carry passengers for the safety and welfare of the passengers and crew is clearly defined. In his manual of Public Health Law, Tobey, thus states the matter: "A private corporation is an individual entity and is liable for its wrongs, civil and criminal, just as is an individual. . . . Railroads, being common carriers are required to take every reasonable precaution to insure the safety of their passengers, including their freedom from the possibility of catching disease. . . . Industrial concerns must provide their employees with safe and healthful surroundings in which to work. If they do not do so and a workman's health is impaired, the employer is liable. . . . Workmen's compensation acts provide for compensation for accidents arising out of the course of employment—Typhoid fever, due to drinking polluted water supplied by an employer has been held in the courts of several states to be an accident within the meaning of the law—Whether workmen's compensation acts apply or not, the common law rule does and that is to the effect that the employer is liable if disease results from causes over which he has control."

That, since the regulations concerning water for drinking and culinary purposes on vessels navigating on the Great Lakes and inland waters of Canada became effective, there has been a decided reduction in the number of typhoid patients put ashore from such vessels is very clearly indicated by comparing the typhoid tables for the years from 1923 to 1926.

This report is in reality a summary of the results of the co-operation of various health officials at Great Lakes ports and the definite efforts of seventeen of these persons to secure the maintenance of supplies of water for drinking and culinary purposes of the standard of the regulations. As during the seasons of navigation of 1923, 1924 and 1925, vessels have been boarded by Canadian Health officials at the ports of Montreal, Toronto, Chatham, Windsor, Owen Sound, Midland, Port McNicoll, Sault Ste. Marie, Port Arthur and Fort William. The findings of the subsequent analyses of water samples thus obtained have emphasized the necessity for general compliance with the Regulations and have been also a powerful aid in accomplishing the improvements made to the water systems of various vessels.

Subsection (b) of section 7 of the regulations requires that "Ice used for cooling table water shall be a clear and sanitary ice and shall be stored in a clean place and before the ice is placed in the water or water receptacle it shall be carefully washed and handled in a sanitary manner."

In this regard careful observation has shown that the methods of handling ice between the time it is taken from the ice-chest and ultimately reaches the passenger in the dining saloon are far from satisfactory.

In particular it has been noticed that some of the waiters are rather careless about transferring ice from the chopper to the dining saloon, in a sanitary manner.

The ice chopping machine should be kept clean. Scalding water poured down the upper hopper each time the machine was used would improve matters. On certain passenger vessels it was found to be in such a position that persons entering or leaving the galley had to step over the ice. It is recommended that a covering be attached to the lower hopper and the chute also covered. Some more permanent utensil other than the saucers commonly found in the hopper, should be provided for removing ice. Some utensil should be used for handling ice and not the operator's bare hands.

It was possible to obtain during 1926 additional information regarding the sources from which water for drinking purposes is obtained for passenger trains operated in the province of Quebec. In this connection it is of interest to note that the total number of passengers carried by all the steam railroads of Canada during the year ended December 31, 1925, was 41,458,084 persons.

The results of an investigation of the milk supplies available in dining cars of trains and dining rooms of vessels carried on by the representatives of the United States Public Health Service during 1926 showed:—

(1) That railroads and vessel companies are using pasteurized milk, certified milk, and raw milk for drinking and food purposes in dining cars and dining rooms of vessels. Some of the milk was obtained from cows not tuberculin tested.

(2) Some of the common carriers did not know definitely what kind of milk was supplied at all points. This was shown by the fact that in at least four instances where pasteurized milk was listed by the carrier, the health officials having supervision over the dairies concerned stated that the milk, in question, was not pasteurized.

(3) The interval that elapsed between the time of purchase of the milk and its use in food or for drinking purposes varied in different instances from one hour to four days.

TABLE No. 1

The total number of cases of typhoid fever reported as originating aboard Canadian vessels navigating on Lakes Superior, Huron, Erie and Ontario during 1925 was 13, as indicated in the attached schedule. There were no deaths reported. As compared with the fifty typhoid cases reported for this district for 1923 this is a most decided reduction in this form of sickness.

During the same period reports of the United States Public Health Service state that ten cases of typhoid fever originating from vessels of United States ownership were treated in United States Marine Hospitals located in the corresponding district south of the international boundary.

TYPHOID FEVER PATIENTS FROM GREAT LAKES STEAMSHIPS

| Steamship | Owners | Number of cases reported | From where reported | Date 1925 | Remarks, Patient's name, etc. |
|---|---|--------------------------|---|-----------|---|
| <i>Lehigh</i> | Geo. Hall Navigation Co..... | 1 | Montreal General Hospital..... | Jan. 16 | R. Larose, member of crew. |
| <i>Marquette and Bessemer No. 2</i> | Marquette and Bessemer Navigation Co..... | 1 | Ashtabula, Ohio..... | May 9 | Alvin, James, ship's watchman. |
| <i>Glendowan</i> | Geo. Hall Navigation Co..... | 1 | Montreal General Hospital..... | May 28 | L. Coulson, Seaman. |
| <i>John J. Rammacher</i> | Eastern Steamship Co..... | 1 | Attended by Dr. Wigle of Wiarton, Ontario. | June 14 | H. M. Mallard, left ship at Port Colborne and went home to Oxenham, Ont., where he was ill for six weeks. |
| <i>Sarnolite</i> | Imperial Oil Co..... | 1 | Dr. J. A. Bell, Sarnia, Ont..... | July 18 | S. S. White, 3rd engineer of S.S. <i>Sarnolite</i> . |
| <i>Kejbar</i> | Keystone Transports, Ltd..... | 1 | Montreal General Hospital..... | July 30 | E. Palmer, member of ship's crew. |
| <i>Kejbar</i> | Keystone Transports, Ltd..... | 1 | Montreal General Hospital..... | Aug. 7 | P. Miller, member of ship's crew. |
| <i>Cape Eternity</i> | Canada Steamship Lines, Ltd..... | 1 | Dr. Edward S. Godfrey, Department of Health of Albany, N.Y..... | Aug. 28 | Miss M. Bowlby, a passenger on S.S. <i>Cape Eternity</i> for three days. |
| Not given..... | Not stated..... | 1 | Toronto Dept. of Health..... | Sept. 7 | Richard Noble, a passenger on steamships plying between Toronto and Port Dalhousie. |
| <i>Michipicoten</i> | Owen Sound Transportation Co..... | 1 | Dr. J. A. Murray, Owen Sound, Ont..... | Sept. 10 | W. J. Smith, a member of the crew of the S.S. <i>Michipicoten</i> . |
| <i>Michipicoten</i> | Owen Sound Transportation Co..... | 1 | Dr. N. F. W. Graham, Sault Ste. Marie | Oct. 4 | Osborne Lang, mate of this steamship treated at Plummer Hospital at Sault Ste. Marie, Ontario. |
| <i>Glenarm</i> | Geo. Hall Navigation Co..... | 1 | St. Andrew's Hospital, Midland..... | Dec. 3 | J. McTague, member of crew. |
| <i>Drummond</i> | Paterson Steamships, Ltd..... | 1 | Dr. R. M. Boyd, M.O.H. for Fort William. | ..... | N. Nicolls, member of ship's crew. |

TABLE No. 2

As indicated in the following schedule the total number of cases of typhoid fever reported as originating aboard Canadian vessels operating in St. Lawrence river waters, from Montreal eastward, during the season of navigation of 1925 was 5.

TYPHOID FEVER PATIENTS TREATED AT CANADIAN MARINE HOSPITALS

| Steamship | Owners | Number of cases reported | From where reported | Date 1925 | Remarks, Patient's name, etc. |
|---------------------|------------------------------|--------------------------|----------------------------|-----------|--|
| <i>Mikula</i> | Department of Marine..... | 1 | North Sydney Hospital..... | April 25 | T. Lochane, member of crew. |
| <i>Mikula</i> | Department of Marine..... | 1 | North Sydney Hospital..... | April 25 | L. Langlois, member of crew. |
| <i>Mikula</i> | Department of Marine..... | 1 | North Sydney Hospital..... | April 25 | P. Laliberte, member of crew. |
| <i>Hertha</i> | Stettiner Dampisch Genl..... | 1 | Sorel Hospital..... | Oct. 2 | M. Perez, member of crew. |
| <i>Mikula</i> | Department of Marine..... | 1 | Hotel Dieu, Quebec..... | Dec. 27 | M. Roger, member of crew of engine room. |

DEPARTMENT OF HEALTH

TABLE No. 3—REPORT OF PROVINCIAL BOARD OF HEALTH

CASES OF TYPHOID FEVER REPORTED FROM GREAT LAKES PORTS

| Municipality | Year | Number of | | Remarks, increase, etc. |
|---------------------|------|-----------|--------|---|
| | | Cases | Deaths | |
| Montreal..... | 1925 | 161 | 56 | 5 directly from steamships. |
| | 1924 | 139 | ..... | ..... |
| | 1923 | 169 | 47 | 4 directly from steamships. |
| | 1922 | 271 | 63 | ..... |
| | 1921 | 187 | 62 | ..... |
| Iroquois..... | 1924 | 8 | ..... | Due to use of canal water. |
| | 1923 | 8 | ..... | ..... |
| Prescott..... | 1922 | ..... | ..... | 3 directly from steamships. |
| | 1921 | ..... | ..... | ..... |
| Kingston..... | 1924 | 6 | ..... | All from outside of Kingston. |
| | 1923 | 9 | 2 | 1 directly from steamships. 6 originated outside of Kingston. |
| | 1922 | A few | ..... | Report of Dr. Williamson. |
| | 1921 | 6 | ..... | “ “ “ “ |
| Port Hope..... | 1922 | 1 | ..... | ..... |
| | 1921 | 6 | ..... | ..... |
| Oshawa..... | 1925 | 1 | ..... | ..... |
| | 1923 | 8 | ..... | ..... |
| | 1922 | ..... | ..... | ..... |
| | 1921 | 6 | ..... | ..... |
| Toronto..... | 1925 | 43 | 9 | 21 contracted infection outside of city. |
| | 1924 | 39 | ..... | 29 originated outside of city. |
| | 1923 | 85 | ..... | 2 directly from steamships. 66 originated outside of city. |
| Long Branch..... | 1924 | 13 | ..... | ..... |
| Oakville..... | 1923 | 1 | ..... | ..... |
| Hamilton..... | 1925 | 18 | ..... | 10 were infected outside of the city. |
| | 1924 | 13 | ..... | 6 from outside of city. |
| | 1923 | 13 | 4 | 9 cases infected outside of city. |
| | 1922 | 21 | 1 | ..... |
| | 1921 | 21 | 3 | ..... |
| St. Catharines..... | 1923 | 13 | 2 | 1 from steamships, increase of 11. |
| | 1922 | 2 | 1 | ..... |
| | 1921 | 13 | ..... | All contracted outside of city. |
| Welland..... | 1925 | 20 | 5 | 8 originated outside of Welland. |
| | 1924 | 19 | ..... | 2 directly from steamships. |
| | 1923 | 10 | ..... | 3 directly from steamships. |
| | 1922 | 14 | ..... | 3 directly from steamships. |
| | 1921 | 4 | ..... | ..... |
| Chippawa..... | 1923 | 10 | 2 | ..... |
| Chatham..... | 1924 | 1 | ..... | 1 case from lake steamship. |
| | 1923 | 1 | ..... | ..... |
| | 1922 | 11 | 4 | ..... |
| London..... | 1923 | 5 | ..... | ..... |
| Windsor..... | 1925 | ..... | ..... | ..... |
| | 1924 | 12 | ..... | 1 directly from steamship. |
| | 1923 | 24 | ..... | 3 directly from steamships. |
| | 1922 | 15 | ..... | 3 directly from steamships. |
| | 1921 | ..... | ..... | 1 from steamship. |
| Sarnia..... | 1925 | 6 | ..... | 1 case from steamship "Sarnolite". |
| | 1924 | 10 | ..... | 2 None. |
| | 1923 | 2 | ..... | Both being employees of vessel companies. |
| | 1922 | 5 | ..... | 4 directly from steamships. |
| | 1921 | 4 | ..... | 3 directly from steamships. |
| Goderich..... | 1925 | - | ..... | ..... |
| | 1923 | 5 | ..... | 1 directly from steamships. |

TABLE No. 3—REPORT OF PROVINCIAL BOARD OF HEALTH—*Concluded*

| Municipality | Year | Number of | | Remarks, increase, etc. |
|----------------------|------|-----------|--------|---|
| | | Cases | Deaths | |
| Collingwood..... | 1925 | — | ..... | None from steamships. |
| | 1924 | — | ..... | None from steamships. |
| | 1923 | 1 | ..... | 1 directly from vessels. |
| | 1922 | 2 | ..... | 2 from steamships. |
| Owen Sound..... | 1925 | 28 | 3 | An epidemic of Typhoid Fever in the city. One from lake vessel. |
| | 1924 | 8 | ..... | 6 from steamships. |
| Midland..... | 1925 | ..... | ..... | Two cases from Great Lakes vessels. |
| | 1924 | 2 | ..... | Both from Great lakes steamships. |
| | 1923 | 11 | ..... | Increase 10, 6 directly from steamships. |
| | 1922 | 1 | ..... | 1 from steamships. |
| | 1921 | 3 | ..... | 2 directly from steamships. |
| Parry Sound..... | 1925 | 3 | ..... |  |
| | 1924 | 2 | ..... | These two cases infected outside of Parry Sound. |
| | 1923 | 13 | ..... | This is for Parry Sound district, increase 3. |
| | 1922 | 14 | ..... |  |
| | 1921 | 11 | 1 | Very bad record. See report of Dr. E. George. |
| Kincardine..... | 1925 | 1 | ..... |  |
| Depot Harbour..... | 1924 | 1 | ..... |  |
| | 1923 | A few | ..... |  |
| Sault Ste. Marie.... | 1925 | 3 | ..... | None from steamships. |
| | 1924 | 1 | ..... | None from steamships, decrease of 4. |
| | 1923 | 5 | ..... | 2 directly from steamships. |
| | 1922 | 6 | ..... | Decrease of 3, 2 from steamships. |
| | 1921 | 3 | ..... | 1 from steamships. |
| Port Arthur..... | 1925 | — | — | |
| | 1924 | — | — | |
| | 1923 | 7 | ..... | Increase 6, 4 originated outside of Port Arthur. |
| | 1922 | 1 | ..... |  |
| | 1921 | 1 | 1 | |
| Fort William..... | 1925 | — | ..... | 3 directly from steamships. |
| | 1924 | 3 | ..... |  |
| | 1923 | 27 | 1 | Increase 6, 11 directly from steamships. |
| | 1922 | 21 | 1 | Increase 11. Two directly from steamships. |
| | 1921 | 10 | 1 | 3 directly from steamships. |

TABLE No. 4—TYPHOID FEVER IN PORTS IN QUEBEC PROVINCE

The report of the Provincial Bureau of Health of Quebec shows that for 1925, there was the following number of cases of Typhoid Fever treated at inland ports, viz:—

| | Cases | Deaths |
|-------------------|-------|--------|
| Montreal..... | 137 | 51 |
| Lachine..... | 15 | |
| Three Rivers..... | 9 | 3 |
| Quebec..... | 6 | |

It is also a matter of record that persons were treated in Montreal for typhoid fever, who prior to their sickness were either employed or were passengers on steamships engaged in traffic on the Inland Waters of Canada.

DEPARTMENT OF HEALTH

TYPHOID FEVER DEATH RATES PER 100,000 OF POPULATION

| Place | 1925 | 1924 | 1923 | 1922 | 1921 | 1920 | 1919 | 1918 | 1917 | 1916 | 1915 | 1914 |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Quebec Province..... | 8.0 | 12.0 | 12.0 | 12.0 | 16.0 | 22.0 | 16.5 | 17.0 | 29.1 | 24.2 | 21.4 | 19.9 |
| Ontario Province..... | 6.0 | 6.0 | 7.9 | 6.0 | 7.3 | 7.0 | 5.2 | 7.5 | 8.4 | 12.0 | 10.7 | 13.5 |
| United States of America | 6.0 | 6.0 | 6.3 | 7.5 | 9.0 | 7.8 | 9.2 | 12.5 | 13.4 | 13.3 | 12.4 | 15.4 |

TABLE No. 5—TYPHOID FEVER STATISTICS

TYPHOID FEVER CASES REPORTED

| Province | Year | Totals | | Increases | | Remarks |
|----------------------|-----------|--------|--------|-----------|--------|---|
| | | Cases | Deaths | Cases | Deaths | |
| Nova Scotia..... | 1925 | | 27 | | 3 | There was a total of 193 from Enteritis and Diarrhoea in 1925. |
| | 1924 | 123 | 24 | 10 | ..... |  |
| | 1923 | 113 | 33 | ..... | ..... |  |
| New Brunswick..... | 1925 | 187 | 17 | | | |
| | 1924 | 233 | 18 | ..... | ..... |  |
| | 1923 | 402 | 28 | ..... | ..... |  |
| Quebec..... | 1925 | | 236 | | | Epidemic at St. Jerome. |
| | 1924-1925 | 562 | 316 | ..... | ..... |  |
| | 1923-1924 | 893 | 334 | 60 | ..... |  |
| | 1922-1923 | 833 | 326 | ..... | ..... |  |
| Ontario..... | 1925 | 859 | 70 | | | Outbreak at Courtright and Owen Sound. Port Colborne epidemic. Cochrane epidemic. |
| | 1924 | 833 | 76 | ..... | ..... |  |
| | 1923 | 1,663 | 212 | 1,087 | 85 | |
| | 1922 | 576 | 127 | ..... | ..... |  |
| Manitoba..... | 1924 | 81 | 20 | | | |
| | 1923 | 110 | 24 | ..... | ..... |  |
| | 1920 | 192 | ..... | ..... | ..... |  |
| Winnipeg City..... | 1925 | 42 | 6 | | | 9 contracted disease while travelling. Report for Winnipeg states that 15 persons contracted Typhoid while travelling outside of city in 1923. |
| | 1924 | 36 | 6 | 10 | ..... |  |
| | 1923 | 26 | 5 | ..... | ..... |  |
| Saskatchewan..... | 1925 | 223 | 39 | 140 | 2 | Decrease. Increase over 1921. |
| | 1924 | 83 | 37 | 68 | 26 | |
| | 1923 | 151 | 63 | ..... | ..... |  |
| | 1922 | 249 | 71 | 66 | ..... |  |
| Alberta..... | 1925 | 127 | 27 | 29 | 3 | Decrease. |
| | 1924 | 98 | 24 | 57 | 12 | |
| | 1923 | 155 | 36 | ..... | ..... |  |
| | 1922 | 169 | 50 | ..... | ..... |  |
| British Columbia.... | 1925 | 109 | 12 | | | |
| | 1924 | 109 | 15 | 30 | ..... |  |
| | 1923 | 79 | 12 | ..... | ..... |  |

TABLE No. 6- STEAMSHIPS OPERATING REGULARLY BETWEEN PORTS IN UNITED STATES AND CANADA

| Steamship | Owner | Certificate if any, issued by | Is water supply analysed | Where is water supply analysed | Ports of call | Remarks |
|----------------------------------|--|------------------------------------|--------------------------|--------------------------------|--|--|
| Fort Hamilton | Furness-Withy Line of New York. | None | | | New York, N.Y. | |
| Iselin (23) | George Hall Corp., Ogdensburg, N.Y. | U. S. P. H. S. | Yes | Soo | and Quebec, Que. river and gulf. | |
| MacTier (23) | " | " | Yes | Soo | " | |
| Robinson (23) | " | " | Yes | Soo | " | |
| Ruby (23) | " | " | Yes | Soo | " | |
| Thompson (23) | " | " | Yes | Soo | " | |
| Kendall (12) | " | " | Yes | Soo | " | |
| Yanto | Louisville and Aubusville Ferry Co. | None | No | | Louisville Landing, N.Y. | New ferry. |
| Morrisburg and Waddington Ferry. | Waddington and Morrisburg Ferry Company Limited. | None | No | | Morrisburg, Ont., Waddington, N.Y. | |
| Chas. F. Lyon | Canadian Pac. Car and Passenger Co., Ltd. | Federal Dept. of Health of Canada. | | Ogdensburg | Prescott, Ont. and Ogdensburg, N.Y. | Water taken from municipal supply at Ogdensburg, N.Y. |
| Miss Vandenberg | Prescott and Ogdensburg Ferry Co. | " | | Ogdensburg | " | These vessel owners do not even reply to our correspondence. |
| Levis Riverside | Holmes Bros. Line Redwood, N.Y. | " | No | Ogdensburg | Alexandria Bay to Brockville. Water taken from municipal supply at Alexandria Bay. | |
| Elmer W | Brockville and Morris town Transportation Co. of Morris town, N.Y. (F. L. Scott, Sec.) | " | No | | Brockville, Ont. and Morristown, N.Y. | New Ferry will not use water. |
| Roosevelt | Alexandria Bay, N.Y. and Rockport, Ont. Ferry Co. | No | No | | Alexandria Bay, N.Y. and Rockport, Ont. | No water aboard. |
| Wyanoke Champion | Thousand Island Navigation Co., Kingston, Ont. | No | No | | " | " |
| Frontenac | Rockport Navigation Co. Ltd., Kingston, Ont. | " | | | Gananoque, Ont. and Clayton, N.Y. | Water taken from certified shore source Gananoque, Ont. |
| Wauke | " | " | | | " | " |
| Louis Pailow 11 ft | Capt. A. MacDonald, 71 and 3rd St., Oswego, N.Y. | No | No | | Kingston, Ont. to Cape Vincent, N.Y. | Water taken from certified shore source at Kingston, Ont. |
| | | | | | Oswego, Fair Haven North Shore, St. Lawrence River. | |

TABLE No. 6—STEAMSHIPS OPERATING REGULARLY BETWEEN PORTS IN UNITED STATES AND CANADA—Continued

| Steamship | Owner | Certificate if any, issued by | Is water supply analysed | Where is water supply analysed | Ports of call | Remarks |
|--------------------------------|--|------------------------------------|--------------------------|--------------------------------------|--|---|
| Ontario No. 1..... | Ontario Car Ferry Co..... | Federal Dept. of Health of Canada. | Yes..... | At Rochester, N. Y. and Coburg, Ont. | Coburg, Ont. and Rochester, N. Y. | Water treated on board ship by distillation. |
| Ontario No. 2..... | " | " | Yes..... | Toronto, Ont. | Toronto, Ont. and Lewiston, N. Y. | " |
| Cayuga..... | Canada Steamship Lines. | Federal Dept. of Health of Canada. | Regularly..... | " | " | Water taken from certified shore sources. |
| Corona..... | " | " | " | " | " | " |
| Chippewa..... | " | " | " | " | " | " |
| Kingston..... | " | " | " | " | Toronto, Ont. and (Charlotte), | Water to be taken from certified shore sources. |
| Toronto..... | " | " | " | " | Rochester, N. Y. | " |
| Cape Trinity..... | Canada Atlantic Transit Co., Toronto. | No..... | " | No..... | Chicago, Ill., Milwaukee and Depot Harbour, Ont. | " |
| Arthur Orr..... | " | " | No..... | " | " | " |
| Kearsarge..... | " | U. S. P. H. S. | " | " | " | " |
| Dalwarric..... | " | Federal Dept. of Health of Canada. | " | " | " | " |
| Maitland No. 1..... | Toronto, Hamilton and Buffalo Railway. | " | No..... | No..... | Pt. Maitland, Ont. and Ashtabula, Ohio. | T. C. issued on receipt of sworn statement of owners. |
| Elmira (17) frt..... | Jones Nav. Co., N. Tonawanda, N. Y. | No..... | Yes..... | Soo..... | Georgian Bay and L. Superior to N. Tonawanda. | " |
| John Gehm (frt.) (23)..... | Bison S. S. Corp., 144 Grove St., Tonawanda, N. Y. | No..... | Yes..... | Soo..... | Gulf St. Lawrence, Chicago and Duluth. | " |
| John J. O'Hagan (frt. 23)..... | White, Gratiwick & Mitchell S. S. Co., N. Tonawanda, N. Y. | No..... | Yes..... | Soo..... | " | " |
| Usona (16) frt..... | White, Gratiwick & Mitchell S. S. Co., N. Tonawanda, N. Y. | No..... | Yes..... | Soo..... | N. Tonawanda to Duluth, intermediate ports and Georgian Bay. | " |
| Canadiana..... | Buffalo and Crystal Beach Corp., Buffalo, N. Y. | U. S. P. H. S. Dis. No. 3. | Yes..... | Buffalo..... | Buffalo, N. Y. and Crystal Beach, Ont. | " |
| Americana..... | " | " | Yes..... | " | " | " |
| Chicora..... | N. Y.-Ontario Ferries Inc. | " | Yes..... | " | Buffalo, N. Y. and Fort Erie, Ont for Jamaica, Newton and Orleans. | " |
| Jamaica..... | " | No drinking or washing water. | " | " | " | " |

| Newton. | " | " | " | " | Yes. | Buffalo. | Buffalo-Erie Beach, Ont., for other two. | T. C. issued on receipt of sworn statement of owners. |
|--------------------------|--|---|---------------------------------------|---|------|----------|--|--|
| Ossian Bedell. | " | " | Yes. | " | Yes. | Buffalo. | Buffalo to Montreal. | |
| Orleans. | " | " | No drinking or washing water. | " | No. | No. | Buffalo to Montreal. | |
| G. H. Ingalls (28). | Eastern S. S. Co., Iuffalo, (i.e. Boland & Cornelius) | " | U. S. P. H. S. | " | No. | No. | Buffalo to Montreal. | |
| G. J. Grammar (28). | " | " | " | " | | | | |
| M. S. Tremaine (28). | " | " | " | " | | | | |
| H. P. Werner (25). | " | " | " | " | | | | |
| Frank B. Baird. | " | " | Federal Dept. of Health of Canada. | " | | | | |
| Norman P. Clement. | " | " | " | " | | | | |
| William H. Daniels. | " | " | " | " | | | | |
| Edwin T. Douglass. | " | " | " | " | | | | |
| Albert C. Field. | " | " | " | " | | | | |
| Nisbet Grammer. | " | " | " | " | | | | |
| Judge Hart. | " | " | " | " | | | | |
| J. A. Holloway. | " | " | " | " | | | | |
| Charles R. Huntley. | " | " | " | " | | | | |
| Judge Kenefick. | " | " | " | " | | | | |
| N. B. MacPherson. | " | " | " | " | | | | |
| Watkins J. Nisbet. | " | " | " | " | | | | |
| J. S. Pillsbury. | " | " | " | " | | | | |
| Robert W. Pomeroy. | " | " | " | " | | | | |
| John J. Rammacher. | " | " | " | " | | | | |
| J. B. Richards. | " | " | " | " | | | | |
| James Stewart. | " | " | " | " | | | | |
| S. G. Taylor. | " | " | " | " | | | | |
| George L. Torain. | " | " | " | " | | | | |
| William C. Warren. | " | " | " | " | | | | |
| Sheldon Wood. | " | " | " | " | | | | |
| C. W. Jacob (21) (frt.) | Hammernull Paper Co., Erie, Pa. | " | U. S. P. H. S. | " | Yes. | So. | Buffalo to Montreal. | Temporary certificates issued on the sworn statements of the vessel owners. |
| | Kolbe Fish Company of Erie, Pa. | " | " | " | | | | |
| B. Lynnan Smith (27). | Great Lakes S.S. Co., Frt. Cleveland. | " | U. S. P. H. S. | " | | | | |
| Wilbert L. Smith (27). | " | " | No. | " | | | | |
| Belgium (25). | " | " | U. S. P. H. S. | " | | | | |
| Chas. M. Warner (25). | " | " | " | " | | | | |
| John Anderson (25). | Morrow S. S. Co., B.R.T. Bldg., Cleveland, O. | " | U. S. P. H. S. | " | Yes. | So. | Ashtabula, Fairport, To- ledo, Ft. William, Pt. Arthur, Duluth, Super- rior, Chicago, Milwau- kee, Green Bay, Escan- naba, Little (current, Matland, Pong Inlet, Half a dozen ports in Canada. | |
| D. R. Callender (25). | " | " | No. | " | | | | |
| A. E. R. Schneider (33). | " | " | No. | " | | | | |
| Thos. Britt (25) (frt.) | " | " | No. | " | | | | |
| Steel Chemist. | U.S. Steel Products. | " | Federal Dept. of Health of Canada. | " | No. | No. | | |

TABLE No. 6—STEAMSHIPS OPERATING REGULARLY BETWEEN PORTS IN UNITED STATES AND CANADA—Continued

| Steamship | Owner | Certificate if any, issued by | Is water supply analysed | Where is water supply analysed | Ports of call | Remarks |
|---------------------------|--|------------------------------------|--------------------------|--------------------------------|--|-------------|
| Steel Motor..... | U. S. Steel Products..... | Federal Dept. of Health of Canada | | | | |
| Steel Electricity..... | " " | " " | | | | |
| Steel Vendor..... | " " | " " | | | | |
| Guardian (13)..... | Pringle Barge Line Company, tugs. " | U. S. P. H. S. | No..... | No..... | Sarnia, Toledo, Detroit, Pt. Edward, Cleveland. | |
| Barkhamstead (14)..... | Penn. and Ontario Transportation Co., Cleveland. | U. S. P. H. S. | No..... | No..... | Pt. Burwell, Ont., and Conneaut, U. S. | Still. |
| Ashtabula..... | Western Res. Navigation. | U. S. P. H. S. | Yes..... | | Cleveland, Ohio and Pt. Stanley, Ont. | Water foul. |
| City of St. Ignace..... | " " | ? | No..... | Cleveland..... | Cleveland, Ohio, Toronto, Montreal etc. | |
| Lake Gaither..... | Jenkins S. S. Co., Cleveland, Ohio. | No..... | Yes..... | Soo..... | Buffalo, Duluth, Chicago, Ft. William. | |
| C. O. Jenkins (33)..... | " | No..... | Yes..... | Soo..... | All U. S. and Canadian ports along lakes Erie, Huron, Michigan and Superior. | |
| T. Shaughnessy (31)..... | frt. | No..... | Yes..... | Soo..... | " " | |
| F. B. Squire (33)..... | Great Lakes S. S. Co. (frt.) Cleveland. | U. S. P. H. S. | Yes..... | Soo..... | " " | |
| H. S. Wilkinson (32)..... | " | U. S. P. H. S. | Yes..... | Soo..... | " " | |
| John B. Cowle (32)..... | " | " | Yes..... | Soo..... | " " | |
| A. E. Nettleton (32)..... | " | " | Yes..... | Soo..... | " " | |
| Norway (32)..... | " | " | Yes..... | Soo..... | " " | |
| John Dunn, Jr. (32)..... | " | " | Yes..... | Soo..... | " " | |
| Harry Coulby (32)..... | " | " | Yes..... | Soo..... | " " | |
| Lyman C. Smith (32)..... | " | " | Yes..... | Soo..... | " " | |
| Denmark (32)..... | " | " | Yes..... | Soo..... | " " | |
| Chas. Hubbard (28)..... | " | " | Yes..... | Soo..... | " " | |
| Smith Thompson (28)..... | " | No..... | Yes..... | Soo..... | " " | |
| J. F. Durston (28)..... | " | U. S. P. H. S. | Yes..... | Soo..... | " " | |
| Sweden (28)..... | " | No..... | Yes..... | Soo..... | " " | |
| H. W. Smith (28)..... | " | U. S. P. H. S. | Yes..... | Soo..... | " " | |
| Wm. Nottingham (27)..... | " | " | Yes..... | Soo..... | " " | |
| Geo. B. Leonard (27)..... | " | " | Yes..... | Soo..... | " " | |
| Monroe C. Smith (27)..... | " | No..... | Yes..... | Soo..... | " " | |
| Pelée..... | U. S. P. H. S. | Yes..... | Yes..... | Soo..... | " " | |
| | Windsor and Pelee Island S. S. Navigation Co., Ltd., of Pelee Island, Ont. | Federal Dept. of Health of Canada. | Yes..... | Sandusky, Ohio | Kingsville, Ont., and Sandusky, O. | |

| Greyhound Detroit | Red Star Navigation Co. Wabash Railway Co. | U. S. P. H. S. | Yes | Toledo | Toledo-Sandusky Detroit and Windsor |
|--|---|--|-----|---------|--|
| Transfer | " | " | No | No | " |
| Transport | " | " | No | No | " |
| Manitowac | " | " | No | No | " |
| Brittania | " | " | No | No | Detroit, Mich. and Windsor, Ont. |
| LaSalle | Co. | U. S. P. H. S. | No | No | Detroit |
| Pleasure | " | " | No | No | Detroit |
| Promise | " | " | No | No | Detroit |
| Sappho | " | U. S. P. H. S. | Yes | " | Detroit and Bois Blanc, Ont. |
| Pontiac | " | " | Yes | " | Bois Blanc and Amherstburg, Ont. |
| St. Claire | " | " | Yes | " | Erie, Pa., and Port Dover, Ont. |
| Columbia | " | " | Yes | " | Detroit, Mich., Walker-ville, Ont. |
| Papoose | " | " | No | No | Detroit and Windsor, Ont. |
| Silver Spray (formerly Frank Kirby) | Nicholson Transit Co., Detroit, Mich. | No | No | No | Certified shore supplies. |
| Essex | Detroit and Walkerville Ferry Co., Detroit. | Unnecessary no water used for drinking, etc. | | | |
| Haleyon | " | " | | | |
| Wayne | " | " | | | |
| Lansdowne | Detroit and Windsor Car Ferry Co. of Can. Nat'l Ry. | Federal Dept. of Health. | | | |
| Huron | Guardian Trust Co. of Detroit. | " | Yes | Detroit | " |
| City of Toledo | White Star Navigation Co. | U. S. P. H. S. | Yes | " | Detroit to Sarnia and Pt. Laubion, Ont. |
| Tashmoo | " | " | Yes | " | Detroit, Pt. Huron and Sarnia. |
| Waukena | Detroit, Pt. Huron Steamship Company. | " | Yes | " | " |
| C. W. Cadwell (15) | United Fuel and Supply Co., Detroit. | No | No | No | Detroit, Windsor. |
| Chas. Holden (15) | " | No | No | No | " |
| F. E. Harvey (14) | " | No | No | No | " |
| Pearson (12) | " | No | No | No | " |
| H. Dahlike (15) | " | No | No | No | " |
| Sachem (14) | " | No | No | No | " |
| Tug Ufasco (10) | " | No | No | No | " |
| Père Marquette Nos. 14 (16) | Père Marquette Ry. Co., Detroit, Mich. | No | No | No | Pt. Huron, Detroit, Sarnia, Windsor. |
| International (11) | Ashley and Dustin Steam Line, Detroit. | No | No | No | Detroit, Sandusky, Windsor, Amherstburg. |
| Put-In-Pay | Detroit Sulphite Transp. Co., Detroit. | U. S. P. H. S. | Yes | No | Detroit, Pt. William, Port Arthur. |
| Tug Bullew (17) | | " | Yes | No | |

TABLE No. 6.—STEAMSHIPS OPERATING REGULARLY BETWEEN PORTS IN UNITED STATES AND CANADA—*Concluded*

| Steamship | Owner | Certificate if any, issued by | Is water supply analysed | Where is water supply analysed | Ports of call | Remarks |
|--------------------------------------|--|------------------------------------|--------------------------|---|---|--|
| Marquette and Bessemer Nos. 1 and 2. | Marquette and Bessemer Dock and Navigation Co. | U. S. | No. | No. | Conneaut, Ohio, and Erieau, Ont. | Water is distilled on board ship. |
| Conneaut (30) | Wyandotte Transp. Co., Detroit, Mich. | U. S. P. H. S. | Yes. | Soo. | All lake ports except L. Ontario, including Pt. Arthur and Ft. William. | |
| Huron (30) | " | " | Yes. | Soo. | | |
| Alpena (29) | " (ft.) | " | Yes. | Soo. | | |
| Wyandotte (29) | " | " | Yes. | Soo. | | |
| Thousand Islander | Northern Navigation Co., Sarnia. | Federal Dept. of Health of Canada. | Yes. | Windsor, Sault Ste. Marie, and Ft. William in Canada. | Detroit, U. S. to Wallaceburg and Chatham, Ont., Detroit, Sault Ste. Marie, Ft. William and Duluth, Minn. | Each of these vessels have an ultra-violet ray purification plant and filter on its Water service. |
| Noronic | " | " | Yes. | " | " | |
| Hamonic | " | " | Yes. | " | " | |
| Huronic | " | " | Yes. | " | " | |
| Ariel | Pt. Huron and Sarnia Ferry Co., Pt. Huron, Mich. | No. | No. | No. | Pt. Huron and Sarnia | |
| James Beard | " | No. | No. | No. | " | |
| City of Pt. Huron | " | No. | No. | No. | " | |
| City of Sarnia | " | No. | No. | No. | " | |
| Hiawatha | " | No. | No. | No. | " | |
| St. Lawrence | " | No. | No. | No. | " | |
| T. W. Robinson (40) | Bradley Transp. Co., Rogers City, Mich. | U. S. P. H. S. | Yes. | Soo. | Great Lakes ports except L. Ontario and Sault Ste. Marie. | |
| B. H. Taylor (38) | " | No. | Yes. | Soo. | " | |
| C. D. Bradley (38) | " | No. | Yes. | Soo. | " | |
| W. F. White (38) | " | No. | Yes. | Soo. | " | |
| Calcite (37) | " | No. | Yes. | Soo. | " | |
| M. T. Greene (12) | Erie and Mich. Ry. and Nav. Co. | U. S. P. H. S. | No. | No. | Cleveland, Georgian Bay ports, Ont. | |
| T. S. Christie (15) | Herman H. Hettler Lumber Co., Chicago. | " | Yes. | Soo. | Montreal and Great lakes ports. | |
| Brandon (25) | Rutlands lake Michigan Transit Co., Chicago. | " | No. | No. | Chicago, Montreal | |
| Brockton (25) | " | " | No. | No. | " | |
| Back Bay (24) | " | No. | No. | No. | " | |
| Bennington (22) | " | U. S. P. H. S. | No. | No. | " | |

| | | | | | | | | |
|-------------------------------|--|----------------|------|--|---|--------------------|---|---|
| Burlington (22). | " | No. | No. | No. | No. | " | " | " |
| North American. | Chicago, Duluth and Georgian Bay Transit Co. | U. S. P. H. S. | Yes. | Chicago, De- troit, Cleve- land, and Buffalo. | Chicago, Ill., and Parry Sound, Ont. | R. U. V. apparatus | | |
| South American. | " | " | Yes. | | " | " | " | " |
| América. | United States and Dom- inion Transp. Co. | " | Yes. | Duluth and Ft. William. | Duluth, Minn. to Port Arthur, Ont. | | | |
| Parks Foster (23) (frt.). | John Printiville & Sons Inc., Chicago. | " | Yes. | Soo. | Great Lakes and Quebec. | | | |
| La Salle (23) (frt.). | Atlas S. S. Co. | No. | Yes. | Soo. | American and Canadian Ports on Lakes Erie, Huron, Superior and Michigan. | | | |

MARINE HOSPITALS SERVICE

The Marine Hospitals Service is operated in conformity with the provisions of chapter 38, Canada Shipping Act (Sick and Distressed Mariners).

During the year the department operated two marine hospitals, namely at Sydney and Lunenburg in the province of Nova Scotia. At the larger ports contracts were made with the local hospitals for the treatment of sick sailors at fixed per diem rates. At ports of lesser importance the department operated emergency hospitals, and at smaller outports satisfactory arrangements were made for their care and treatment through the agency of the collectors of national revenue. The following is a list of the hospitals which were under contract with this department during the year 1926-27:—

NOVA SCOTIA

| | |
|--------------------|--|
| Amherst | Highland View Hospital. |
| Antigonish | St. Martha's Hospital. |
| Bridgewater | Dawson Memorial Hospital. |
| Glace Bay | St. Joseph's Hospital. |
| Halifax | Victoria General Hospital. |
| | City Health Board (Contagious Diseases). |
| | Tuberculosis Hospital. |
| Kentville | Nova Scotia Sanatorium (Tuberculosis). |
| Middleton | Soldiers' Memorial Hospital. |
| New Glasgow | Aberdeen Hospital. |
| North Sydney | Hamilton Memorial Hospital. |
| Pictou | Pictou Memorial Hospital. |
| Springhill | Springhill Cottage Hospital. |
| Windsor | Payzant Memorial Hospital. |
| Yarmouth | Yarmouth Hospital. |

NEW BRUNSWICK

| | |
|-------------------|--|
| Bathurst | James H. Dunn Hospital. |
| Campbellton | Hotel Dieu. |
| Chatham | Hotel Dieu. |
| Moncton | Moncton Hospital. |
| River Glade | Jordan Memorial Sanatorium (Tuberculosis). |
| St. John | General Public Hospital. |
| | St. John County Hospital (Tuberculosis). |
| St. Stephen | Chipman Memorial Hospital. |
| Tracadie | Hotel Dieu. |

PRINCE EDWARD ISLAND

| | |
|---------------------|--------------------------------|
| Charlottetown | Charlottetown Hospital. |
| | Prince Edward Island Hospital. |
| Summerside | Prince County Hospital. |

QUEBEC

| | |
|--------------------|--|
| Chicoutimi | Hotel Dieu. |
| Lake Edward | Lake Edward Sanatorium (Tuberculosis). |
| Levis | Hotel Dieu. |
| Montreal | Montreal General. |
| | Notre Dame. |
| | Hotel Dieu. |
| | Royal Victoria. |
| | St. Paul's (Contagious diseases). |
| | Alexandra (Contagious diseases). |
| | Grace Dart Home (Tuberculosis). |
| | Convalescent Home. |
| Quebec | Hotel Dieu. |
| | Jeffery Hale's. |
| | Civic Hospital (Contagious diseases). |
| | Laval Hospital (Tuberculosis). |
| Sorel | Hopital General. |
| St. Jean | Hopital St. Jean. |
| Three Rivers | Hopital St. Joseph. |

BRITISH COLUMBIA

| | |
|-----------------------|--|
| Anyox | Anyox General Hospital. |
| Chemainus | General Hospital. |
| Cumberland | General Hospital. |
| Duncan | King's Daughters' Hospital. |
| Ladysmith | General Hospital. |
| Nanaimo | General Hospital. |
| New Westminster | St. Mary's Hospital. |
| Ocean Falls | Ocean Falls Hospital. |
| Port Alberni | West Coast General Hospital. |
| Powell River | St. Luke's Hospital. |
| Prince Rupert | General Hospital. |
| Tranquille | Tranquille Sanatorium (Tuberculosis). |
| Vancouver | St. Paul's Hospital. |
| Victoria | St. Joseph's Hospital. |
| | Royal Jubilee Hospital. |
| | City Isolation Hospital (Contagious diseases). |

Emergency hospitals were operated at the following ports:—

Nova Scotia: Arichat, Canso, Digby, Liverpool, Lockport, Louisburg, Shelburne.

Prince Edward Island: Souris.

Quebec: Port Alfred.

Although there was no outbreak of major or minor contagious diseases during the year, there was a marked increase in the shipping activities on both the Atlantic and Pacific coasts; and, as a consequence, the number of sick and injured mariners was increased proportionately.

The total number of sick, distressed and injured sailors treated during the year 1926-27 was 5,173, as compared with 3,782 in the previous year.

The number of days of hospital treatment during the year 1926-27 was 52,048, as compared with 36,292 in the previous year.

The total expenditure for the year 1926-27 was \$189,923.92; and the total revenue from the collection of Sick Mariners' Dues was \$195,080.28. Detailed information as concerns the expenditure will be found in the financial statement.

A tabular statement of diseases and injuries treated during the year 1926-27 is appended.

STATEMENT OF DISEASES AND INJURIES TREATED DURING THE YEAR 1926-27

| | |
|---------------------------|-------|
| GENERAL DISEASES | 1,149 |
| Measles | 13 |
| Diphtheria | 14 |
| Chicken-pox | 1 |
| Mumps | 4 |
| Scarlatina | 4 |
| Erysipelas | 4 |
| Typhoid | 22 |
| Typhoid inoculation | 24 |
| Tuberculosis | 52 |
| Malaria | 18 |
| Syphilis | 214 |
| Gonorrhoea | 271 |
| Alcoholism | 8 |
| Beri-beri | 3 |
| Rheumatism | 112 |
| Anaemia | 8 |
| New growths: | |
| Malignant | 12 |
| Non-malignant | 23 |
| Cyst | 20 |
| General debility | 24 |
| Sleeping sickness | 1 |
| Neurasthenia | 10 |
| Ptomaine | 10 |
| Hemophilia | 1 |
| Influenza | 275 |
| Vaccination | 1 |

| | |
|---|-------|
| LOCAL DISEASES | 2,676 |
| <i>Diseases of the Nervous System</i> | 105 |
| 1. Of the nerves..... | 22 |
| Neuritis | 22 |
| 2. Of the Spinal Cord and Membranes..... | 2 |
| Degeneration of lateral column..... | 2 |
| 3. Of brain and membranes..... | 4 |
| Meningitis | 3 |
| Encephalitis | 1 |
| 4. Functional and other nervous diseases, etc. | 77 |
| Apoplexy | 4 |
| Paralysis | 3 |
| Hemiplegia | 1 |
| Epilepsy | 5 |
| Neuralgia | 30 |
| Headache | 4 |
| Hysteria | 2 |
| Myalgia | 22 |
| Insomnia | 1 |
| Dementia praecox | 5 |
| <i>Diseases of the Eye</i> | 69 |
| Conjunctivitis | 43 |
| Choroiditis | 1 |
| Ulcer cornea | 10 |
| Iritis | 5 |
| Pan-ophthalmitis | 1 |
| Strabism | 3 |
| Trachoma | 1 |
| Keratitis | 2 |
| Blepharitis | 2 |
| Cataract | 1 |
| <i>Diseases of the Ear</i> | 83 |
| Cerumen | 38 |
| Otitis media | 34 |
| Mastoiditis | 2 |
| Deafness | 2 |
| Otalgia | 7 |
| <i>Diseases of the Nose</i> | 51 |
| Rhinitis | 14 |
| Abscess | 4 |
| Epistaxis | 6 |
| Coryza | 15 |
| Frontal sinus | 3 |
| Deviated septum | 9 |
| <i>Diseases of the Circulatory System</i> | 66 |
| Heart disease (valcular)..... | 14 |
| Tachycardia | 10 |
| Arterio-sclerosis | 2 |
| Varicose veins | 16 |
| Goitre | 1 |
| Endocarditis | 4 |
| Myocarditis | 9 |
| Angina pectoris | 5 |
| Cardialgia | 4 |
| Phlebitis | 1 |
| <i>Diseases of the Respiratory System</i> | 379 |
| Bronchitis | 138 |
| Tonsillitis | 113 |
| Pneumonia | 41 |
| Broncho-pneumonia | 3 |
| Pleuro-pneumonia | 1 |
| Laryngitis | 7 |
| Congestion lungs | 8 |
| Empyema | 2 |
| Pleurisy | 42 |
| Asthma | 16 |
| Hemorrhage lungs ?..... | 7 |
| Abscess lungs | 1 |

| | |
|--|-----|
| <i>Diseases of the Digestive System.....</i> | 869 |
| Dental caries | 133 |
| Toothache | 74 |
| Alveolar abscess | 15 |
| Enterorrhagia | 1 |
| Quinsy | 7 |
| Pharyngitis | 15 |
| Ulcerated stomach | 26 |
| Gastritis | 85 |
| Indigestion | 84 |
| Pyorrhoea..... | 12 |
| Cancer stomach | 1 |
| Fistula | 16 |
| Hemorrhoids | 32 |
| Appendicitis | 98 |
| Colitis | 3 |
| Jaundice | 13 |
| Diarrhoea | 28 |
| Constipation | 36 |
| Hernia | 104 |
| Dysentery | 7 |
| Enteritis | 19 |
| Dyspepsia | 15 |
| Hepatic colic | 4 |
| Gastro-enteritis | 4 |
| Intestinal obstruction | 7 |
| Cholecystitis | 12 |
| Cholelithiasis | 2 |
| Ulcer duodenum | 12 |
| Peritonitis | 4 |
| Abdominal adhesions | 6 |
| <i>Diseases of the Lymphatic System.....</i> | 34 |
| Adenitis | 34 |
| <i>Diseases of the Urinary System.....</i> | 96 |
| Nephritis | 27 |
| Bright's disease | 1 |
| Renal colic | 10 |
| Cystitis | 24 |
| Prostatitis | 11 |
| Retention | 8 |
| Renal calculus | 4 |
| Hematuria | 4 |
| Pyelitis | 3 |
| Diabetes | 4 |
| <i>Diseases of the Generative System.....</i> | 166 |
| Urethritis | 25 |
| Stricture | 32 |
| Paraphimosis | 4 |
| Chancroids | 20 |
| Varicocele | 14 |
| Hydrocele | 13 |
| Orchitis | 27 |
| Phimosis | 3 |
| Epididymitis | 28 |
| <i>Diseases of the Organs of Locomotion.....</i> | 175 |
| Osteitis | 5 |
| Sciatica | 16 |
| Lumbago | 54 |
| Osteo-myelitis | 4 |
| Bursitis | 9 |
| Sinusitis | 10 |
| Periostitis | 6 |
| Synovitis | 18 |
| Arthritis | 49 |
| Neurosis | 2 |
| Myositis | 2 |
| <i>Diseases of the Connective Tissues.....</i> | 325 |
| Cellulitis | 230 |
| Abscess | 95 |

| | |
|-----------------------------------|-------|
| <i>Diseases of the Skin</i> | 258 |
| Carbuncle | 14 |
| Boils | 78 |
| Bursitis | 1 |
| Scabies | 16 |
| Erythema | 6 |
| Eczema | 19 |
| Herpes Zoster | 3 |
| Urticaria | 6 |
| Dermatitis | 21 |
| Ulcers | 47 |
| Whitlow | 22 |
| Impetigo | 4 |
| Psoriasis | 3 |
| Seborrhoea | 1 |
| Acne | 6 |
| Anthrax | 7 |
| Sycosis | 2 |
| Aloepaacia | 2 |
| <i>General Injuries</i> | 117 |
| Multiple injuries | 33 |
| Burns and scalds..... | 84 |
| <i>Local Injuries</i> | 1,231 |
| Contusions | 94 |
| Injuries: | |
| Face | 17 |
| Eyes | 25 |
| Head | 37 |
| Throat | 2 |
| Wrist | 20 |
| Chest | 10 |
| Scalp | 7 |
| Fingers | 132 |
| Abdomen | 11 |
| Back | 23 |
| Side | 12 |
| Lip | 5 |
| Leg | 33 |
| Spine | 3 |
| Knee | 23 |
| Arm | 37 |
| Shoulder | 27 |
| Scrotum | 3 |
| Toes | 14 |
| Foot | 46 |
| Hand | 94 |
| Thigh | 9 |
| Ribs | 6 |
| Ankle | 20 |
| Elbow | 7 |
| Fractures: | |
| Skull | 14 |
| Ribs | 59 |
| Leg | 18 |
| Clavicle | 5 |
| Ischium | 1 |
| Femur | 5 |
| Nose | 5 |
| Tibia and fibula..... | 8 |
| Tibia | 2 |
| Fibula | 6 |
| Spine | 9 |
| Ulna | 2 |
| Foot | 10 |
| Os calcis | 2 |
| Patella | 1 |
| Elbow | 1 |
| Wrist | 4 |
| Maxillary | 6 |
| Fingers | 12 |
| Arm | 15 |
| Radius | 7 |
| Metacarpal | 5 |
| Ankle | 8 |
| Scapula | 1 |

Local Injuries—Concluded

Dislocations:

| | |
|----------------|----|
| Hand | 3 |
| Shoulder | 10 |
| Femur | 1 |
| Foot | 1 |

Sprains:

| | |
|----------------|----|
| Hand | 6 |
| Ham | 3 |
| Back | 17 |
| Knee | 3 |
| Ankle | 18 |
| Elbow | 1 |
| Shoulder | 7 |
| Arm | 2 |
| Wrist | 8 |
| Foot | 4 |
| Abdomen | 3 |

Strains:

| | |
|---------------------------|----|
| Foot | 2 |
| Abdomen | 2 |
| Fatigue | 3 |
| Shock | 5 |
| Frost-bites | 7 |
| Foreign body finger | 2 |
| Foreign body arm | 2 |
| Foreign body eye | 48 |
| Foreign body ear | 2 |
| Foreign body throat | 2 |
| Foreign body knee | 1 |
| X-ray examination | 30 |
| Malingering | 3 |
| Exposure | 1 |
| Observation | 11 |
| Examination | 52 |
| No diagnosis | 48 |

| | |
|------------------------|-------|
| General Diseases | 1 149 |
| Local Diseases | 2 676 |
| General Injuries | 117 |
| Local Injuries | 1 234 |
| Total | 5 173 |

QUARANTINE SERVICE

The following organized quarantine stations were maintained during the fiscal year:—

Province of Quebec.—Grosse Isle in the river St. Lawrence (with Father Point as the inspecting base); with Quebec and Montreal Harbours as sub-stations.

Province of Nova Scotia.—(a) Halifax, the Harbour and Lawlor's Island; (b) Sydney, North Sydney, the Harbour and Point Edward.

Province of New Brunswick.—St. John, the Harbour and Partridge Island.

Province of British Columbia.—Victoria, the Harbour and William Head; with Vancouver and the Harbour as a substation.

Each organized quarantine station and substation is in charge of a medical officer.

A substation is a port of final destination where vessels, when empty, can, with greater facility, be fumigated or disinfested, and where other functions may, when required, be performed, as directed by the minister. This is the reason for having fumigating officers at Montreal and Vancouver.

The following table shows the number of vessels and personnel inspected at the several stations:—

| Station | Vessels inspected | Passengers | | | Crews | Cattle-men | Stow-aways | Dis-tressed seamen, etc. | Total persons in-spected |
|---|-------------------|-------------|-------------|-------------|---------|------------|------------|--------------------------|--------------------------|
| | | First class | Cabin class | Third class | | | | | |
| Province of Quebec— Father Point..... | 812 | 2,944 | 26,664 | 78,948 | 70,737 | 563 | 58 | ..... | 179,914 |
| Province of Nova Scotia— Halifax..... | 467 | 4,420 | 27,015 | 72,461 | 65,504 | 48 | 148 | 17 | 169,613 |
| North Sydney..... | 254 | ..... | 23 | ..... | 8,315 | 123 | 23 | ..... | 8,484 |
| Province of New Bruns- wick— St. John..... | 361 | 1,367 | 2,199 | 19,357 | 23,146 | 289 | 27 | 6 | 46,391 |
| Province of British Columbia— William Head..... | 755 | 7,729 | 31,821 | 17,405 | 53,581 | ..... | 25 | ..... | 110,561 |
| Totals..... | 2,649 | 16,460 | 87,722 | 188,171 | 221,283 | 1,023 | 281 | 23 | 514,963 |

Persons to the number of 151 were detained at quarantine stations. Of these, 44 were sick with quarantinable, suspected quarantinable, or minor infectious disease; the remaining 107 were either detained for medical observation as contacts of the respective diseases or were members of families accompanying the sick, from whom they could not well be separated.

In considering these figures it should be noted that, in line with the practice obtaining in other countries of the world, it is the policy of the department, as soon as adequate facilities can be afforded, to land all minor infectious cases, such as measles, chickenpox, scarlet fever, etc., direct at the port of arrival, for treatment in immigration or city hospitals, reserving the quarantine hospitals for the treatment of the major diseases—smallpox, plague, yellow fever, etc. Accordingly, all minor infectious cases found on vessels coming up the St. Lawrence river are now landed at Quebec and treated at the Savard Park immigration hospital. Also, at the port of Halifax, minor infectious cases hitherto detained at the Lawlor's Island quarantine station, are now treated in the Immigration Hospital at Rockhead. This practice will be continued during the winter season each year, when the number of vessels disembarking passengers at Halifax is at a maximum and ice conditions in the harbour at times render Lawlor's Island difficult of access. During the summer months, however, when the main flow of immigration is diverted to the St. Lawrence ports, it is felt that the comparatively small number of minor infectious cases likely to be landed at Halifax would not be sufficient to justify keeping the Rockhead hospital in operation. Such cases will, therefore, from May to November, continue as heretofore to be treated at the Lawlor's Island quarantine hospital.

The minor infectious cases treated at Savard Park and Rockhead are reported under the Immigration Medical Service Division.

The only major quarantinable cases which occurred during the year were two cases of smallpox, one, a member of the crew of a ship steaming up the St. Lawrence, who was landed at Grosse Isle; the other, a wireless officer from a ship which called at Halifax. These are referred to in the respective reports of the quarantine officers concerned.

It is not now necessary, under amended section 28 of the Quarantine Regulations, for unvaccinated third class ocean passengers arriving at ports of Canada from British and foreign countries, to submit to compulsory vaccination, unless

the said passengers have come from a district where smallpox prevails in epidemic form, or there is smallpox on board, to which disease, in the judgment of the quarantine officer, they have been exposed.

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY STATIONS

| Station | Sick | Hospital days | Contacts and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|--|------|---------------|--|--------------------------|------------------------|---|
| Quebec, Que. (Grosse Isle)..... | 1 | 15 | 45 | 225 | 46 | 240 |
| Halifax, N.S. (Lawlor's Island)..... | 19 | 346 | 15 | 239 | 34 | 575 |
| St. John, N.B. (Partridge Island)..... | 20 | 234 | 39 | 427 | 59 | 661 |
| Victoria, B.C. (William Head).... | 4 | 53 | 8 | 65 | 12 | 118 |
| Totals..... | 44 | 648 | 107 | 946 | 151 | 1,594 |

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY DISEASES

| Diagnosis | Sick | Hospital days | Contacts (detained for observation) and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|----------------------|------|---------------|---|--------------------------|------------------------|---|
| *Bronchitis..... | 1 | 14 | 1 | 14 | 2 | 28 |
| Chickenpox..... | 5 | 43 | 9 | 82 | 14 | 125 |
| Diphtheria..... | 1 | 25 | 2 | 50 | 3 | 75 |
| *Erythema..... | 1 | 6 | 1 | 6 | 2 | 12 |
| *Food poisoning..... | 1 | 13 | | | 1 | 13 |
| Influenza..... | 10 | 105 | 9 | 101 | 19 | 206 |
| †Laryngitis..... | 1 | 1 | | | 1 | 1 |
| Measles..... | 12 | 153 | 27 | 266 | 39 | 419 |
| Mumps..... | 5 | 47 | 9 | 88 | 14 | 135 |
| *Nephritis..... | 1 | 21 | | | 1 | 21 |
| Scarlet fever..... | 3 | 178 | 2 | 104 | 5 | 282 |
| Smallpox..... | 2 | 37 | 45 | 225 | 47 | 262 |
| *Tonsillitis..... | 1 | 5 | 2 | 10 | 3 | 15 |
| Totals..... | 44 | 648 | 107 | 946 | 151 | 1,594 |

* Cases marked thus were admitted to Quarantine for observation, subsequent diagnosis being as stated.

†* Died in hospital.

COMPULSORY FUMIGATION OF SHIPS

Under section 37 of the Quarantine Regulations, all vessels (other than coastwise) arriving at quarantine stations in Canada must produce a certificate showing date of last fumigation. Where more than six months have elapsed since last fumigation (in the case of certain modern types of vessels this period has now been extended to twelve months) the vessel is ordered to be fumigated at the Canadian port of destination before being permitted to put to sea again.

Facilities for fumigating ships, either by the cyanide or sulphur method, are now available at the ports of Halifax, North Sydney, St. John, Quebec, Montreal, Vancouver, Victoria, and Prince Rupert. In every case this work is carried out under the supervision of a duly qualified medical officer of the department.

The following statement shows the number of vessels fumigated at the ports named:—

| | |
|---------------------|-----|
| Halifax | 31 |
| North Sydney | 4 |
| St. John | 11 |
| Quebec | 4 |
| Montreal | 60 |
| Vancouver | 166 |
| Victoria | 4 |
| Prince Rupert | 7 |
| Total | 287 |

The following extracts are from reports received from the respective quarantine officers:—

Grosse Isle, Quebec (Medical Superintendent, Dr. G. E. Martineau)

"There were 812 steamers inspected, being 237 fewer than last year. Of these, 160 were passenger steamers, being 20 per cent of the total, and 10 less than the previous season.

"This does not mean that there was less work for your medical officers, but that owing to the coal strike in Great Britain, many vessels called at Sydney for bunkers and therefore did not require to obtain pratique at Father Point, although your officers had to go alongside each of them just the same. The *Jalobert* went alongside 2,976 steamers (1,615 inward and 1,361 outward), and as your officers had to be on board and on deck for everyone this means that they really did the work that clearing 2,976 would mean although it does not show in the records.

"All vessels that required it were given pratique at Father Point except seven: 1 on May 12, 1 on July 4, 4 on October 27, and 1 on November 2. One of these vessels having smallpox on board was cleared at Grosse Isle and the six others were passed on to Quebec for clearance owing to its being too rough for your officers to go on board without danger to themselves or to the vessels to be boarded and to the pilots' tender.

"A marked increase over last year's figures may be noticed in the third-class passengers who number 78,948 this year as compared with 51,530 last year. This increase in immigration is no doubt the result of greater transportation facilities, etc., accorded by the Government to that class of passengers.

"Infectious or contagious disease was reported or discovered on 71 occasions on 21 passenger boats. These included all the minor infectious diseases, and on one occasion smallpox was diagnosed on the ss. *Athenia*, one of the crew. This vessel was taken to Grosse Isle where she arrived on July 4 at 9 a.m. The patient was immediately removed to the quarantine hospital and 45 other members of the crew who had been directly exposed to infection were landed there for quarantine and observation. Everybody on board the vessel that required vaccination, 796 in all, having been vaccinated, and the ship's hospital and compartments occupied by the contacts thoroughly disinfected, the steamer was released at 3 p.m. the same day. The contacts detained in quarantine were released as soon as they showed immunity or positive reaction. The patient having fully recovered was discharged from hospital on July 19.

"Deaths during the voyage were reported on six occasions on the following vessels and from the following causes: ss. *Antonia*, acute uraemia (1), heart failure (1); ss. *Montroyal*, scarlet fever (1); ss. *Montrose*, cause unknown (1); ss. *Metagama*, marasmus (1); ss. *Canadolite*, accident (1).

"Births during the voyage were reported on six occasions as follows: ss. *Montclare* (1); ss. *Empress of Scotland* (4); ss. *Metagama* (1).

"Passengers requiring vaccination under the Regulations were vaccinated on three occasions on the ss. *Empress of France*; *Letitia* and *Montcalm*.

"The following steamers were fumigated at Quebec: ss. *Ryasa*; *Imperator*; *Philip T. Dodge* and *Terneusen*.

Lawlor's Island, Halifax, N.S. (Quarantine Officer, Dr. J. V. Graham).

"During the year 167 vessels were reported. These vessels carried 65,504 crew, 4,420 first class passengers, 27,015 cabin class passengers, 72 461 third class passengers, 148 stowaways, 48 gentlemen, and 17 distressed seamen. The vessels reported 8 deaths and 1 birth at sea. The deaths were classified as follows: Beri-Beri 1, organic heart disease 3, pneumonia 3, and suicide by drowning 1.

"The following cases of disease and relatives accompanying were taken to the Station Hospital, Lawlor's Island: Influenza, 10 cases with 9 accompanying; scarlet fever, 2 with 1 accompanying; acute laryngitis with broncho-pneumonia, 1 (this case was accompanying the scarlet fever family and died on the day of admission from broncho-pneumonia); streptococcal tonsillitis, 1 with 2 accompanying; chickenpox, 1 with 1 accompanying; German measles, 1 with 2 accompanying (one of those accompanying the German measles developed nephritis five days after admission); observation, 1 (diagnosed later as erythema), with 1 accompanying; and smallpox, 1 case. There was no case of cross infection or secondary infection.

"Instructions having been received to transfer to the Rockhead Immigration Hospital cases of minor infectious diseases requiring hospitalization, as soon as we were advised the hospital was ready to receive them we handed over to the medical officer in charge of immigration, the following cases and relatives accompanying, the first case on December 19, 1927: Measles, 3 with 9 accompanying; mumps 1; influenza, 7 with 3 accompanying; chickenpox, 2 with 3 accompanying; scarlet fever, 1 with 2 accompanying; erysipelas 1. The 5 contacts of the smallpox were also detained at the Immigration Hospital until they showed a positive vaccinal reaction.

"Only one case of quarantinable disease was reported during the year, the ss. *Alaunia* reporting by radio on January 20, that the ship's surgeon had a suspected case of smallpox on board. On arrival of the ship on January 23, I saw the case and concurred in the ship's surgeon's diagnosis of smallpox. The patient proved to be a wireless officer and the only passenger contacts of the case were the cabin passengers, the wireless officers being accustomed to taking their meals in the cabin dining room. The ship's surgeon, however, had taken every precaution by isolating the case and vaccinating every person on board, as soon as his suspicions of smallpox were aroused. After securing the services of nurse Lindsay and engaging a temporary cook, the patient was removed to the Lawlor's Island Hospital. Careful examination of the vaccinations of the cabin passengers revealed, of those to be landed at Halifax, 18 in number, but 5 without a positive reaction. These 5 were re-vaccinated by me and disinfected on board and transferred to the Rockhead Hospital and detained in Quarantine until a positive reaction showed. The cabin passengers allowed to proceed were all disinfected on board before landing.

Thirty-one vessels were fumigated at this station during the year, 24 steamers, 6 schooners, and 1 motor ship. Eleven dead rats were recovered after fumigation on 2 of these vessels, and 1 vessel, which had evidence of rat infestation before fumigation, sailed before a proper search for dead rats could be made.

"Other than the routine vaccination of the quarantine staff, which took place in January, there were but 5 vaccinations performed at this station during the year, those being the contacts of smallpox ex the ss. *Alaunia*.

William Head, B.C. (Quarantine Officer, Dr. C. P. Brown)

"Comparing total traffic with that of last year, the number of vessels inspected has decreased from 819 to 755. This is largely a decrease in coast-wise traffic inspection, as there have been no infected ports in North America during the year. On the other hand the total number of people inspected has increased from 83,709 to 110,561.

"General health conditions of traffic have been good, as evidenced by the fact that there have been no quarantines throughout the year. The proportion of vessels bringing bills of health showing quarantinable disease has decreased from 61 per cent last year to 44 per cent this year.

"The quarantinable diseases have been present as follows:—

"Plague at Hohokaa, one of the Hawaiian islands, remote from Honolulu; at Callao during April; at Buenos Aires during April; at Yokohama during July; at the Azores during December; at Colombo and Singapore at various times.

"Cholera at Manila from April to October; at Shanghai during August, September and October; at Dairen during October.

"Smallpox in epidemic form at San Pedro during May (the last of last year's epidemic); at Yokohama during April and May.

"Typhus noted once, a case at Shanghai in September.

"Yellow fever none.

"The cyanide method of fumigation has been introduced at the port of Vancouver during the year. It is insisted on as the method of choice with all freighters. So far it has not been used on the passenger vessels that run here regularly and fumigate their holds every trip. Dr. H. P. Cox is acting as a full-time medical officer in charge of fumigation at Vancouver. His report is attached. He has also from time to time submitted valuable reports on the structure of the vessels he has fumigated and the amount of ratproofing that has been attempted. A beginning has been made in the examination of rats found dead on these vessels after fumigation.

"Notes have been kept on many of the vessels inspected at this station regarding their deratization. Apparently there is very little special ratproofing done. The modern motor vessel, and also the modern oil fuel steam vessel, offer little harborage for rats, as the fuel oil is carried in tanks replacing the open bilges. With modern vessels it is a question of cargo. If this is grain or other cargo that is readily available as food, rats are frequently found on the vessel, otherwise a few only may be found in stores and crews' quarters. Some captains prefer trapping, but it is my impression that mostly they prefer regular fumigations, and with cyanide, as it can be used in quarters without damage, and gets rid of roaches.

"Buildings and equipment on this station have been kept ready for work. Routine repairs and upkeep have been carried out by our own staff with materials purchased by the Department of Public Works.

"Our quarantine vessels, the *Madge* and the *Evelyn*, were repaired under the supervision of the officers at H.M.C. dockyard, Esquimalt. In addition to the two semi-annual overhauls of the *Madge*, there were three visits to the dockyard for emergency repairs. At her next visit it will be necessary to take into serious consideration the repair or replacement of her hull. The *Evelyn* also had special repairs done on two occasions. I would like to express my appreciation of the kindness and the efficient help we have had in this from the naval officers.

"At the Bentinck Island leper station, three cottages for patients and one for a caretaker are just now being completed by the Department of Public Works. This will give us quarters available for eight more patients."

VESSELS' DESTINATION

| | |
|--|-------------|
| Vancouver | 435=(57.6%) |
| Victoria | 218=(28.9%) |
| New Westminster | 39=(5.1%) |
| Nanaimo | 18=(2.3%) |
| Comox | 11=(1.5%) |
| Powell River | 10=(1.4%) |
| Union Bay | 9 |
| Chemainus | 7 |
| Port Alice | 3 |
| Port Alberni, Queen Charlotte City, Wood Fibre, Englewood, Nanoose | 1 each |

VESSELS' NATIONALITY

| | |
|----------------------------|-------------|
| British | 279=(36.9%) |
| Japanese | 157=(20.8%) |
| United States | 126=(16.7%) |
| Norwegian | 57=(7.5%) |
| Swedish | 27=(3.5%) |
| Danish | 24=(3.2%) |
| French | 23=(3.0%) |
| Italian | 21=(2.8%) |
| Dutch | 20=(2.6%) |
| German | 14=(1.8%) |
| Belgian | 3 |
| Panamaian | 3 |
| Free City of Dantzig | 1 |

WHERE FROM

| | |
|---------------------------------|-------------|
| Orient | 352=(46.6%) |
| North Europe | 191=(25.3%) |
| Canada and United States | 133=(17.6%) |
| Australasia | 40=(5.3%) |
| Central and South America | 39=(5.1%) |

TIME OF INSPECTION

| | | | |
|--|-----------|-----------------|-----------|
| Daytime..... | 455=(60%) | Night-time..... | 300=(40%) |
| Vessels bringing bills of health showing quarantinable disease | 334=(44%) | | |
| Bills of health brought showing quarantinable disease..... | 493 | | |
| Vessels requiring fumigation according to Canadian Regulations | 115 | | |
| Vessels quarantined | " | | |
| Vessels remanded from unorganized stations for examination of suspected case of quarantinable disease..... | 1 | | |

LABORATORY WORK

| | |
|--|-----|
| Specimens examined, total..... | 320 |
| Smears stained and examined..... | 62 |
| From leper patients..... | 51 |
| Positive for B. Leprae..... | 32 |
| Negative | 19 |
| From bubo | 5 |
| All negative for B. Pestis. | |
| From pigs dead after inoculation..... | 5 |
| All negative for B. Pestis. | |
| From Sputum | 1 |
| Negative for B. Tuberculosis. | |
| Cultures | 5 |
| From bubo, negative for plague..... | 3 |
| From pigs, dead after inoculation..... | 2 |
| Negative for plague. | |
| Urines | 4 |
| Rats examined pathologically and guinea pigs inoculated with portion liver and spleen..... | 249 |
| Pigs dead after inoculation..... | 2 |
| All negative for plague. | |

Vancouver, Substation, B.C. (Fumigating Officer, Dr. H. P. Cox)

"A full-time fumigation officer commenced duty at this port on May 1, 1926. Owing to various causes, mainly the delay in the arrival of the requisite material, cyanide fumigation was not begun till the first day of September.

"During the period of eleven months the total number of ships fumigated was 166. Of this number 76 were remanded, and 90 were fumigated by request.

"The bulk of the shipping entering this port comes from Oriental ports, and during the time of the presence of plague at Yokohama nearly all vessels which had touched at that port were remanded for fumigation on arrival at Vancouver.

"Of vessels fumigated the number arriving from Orient was 109; from United States, 18; from Atlantic coast, 8; from other ports, 31.

"From May till September there were fumigated with sulphur, 59 ships; from September till March 31 there were fumigated with sulphur, 53 ships; from September till March 31 there were fumigated with cyanide, 54 ships.

"The number of ships on which rats were picked up was 56. Of this number 26 were remanded and 30 done by request.

"The total number of rats collected was 650. The total number of rats collected from ships remanded was 269 and from ships done by request 382.

"The total number of rats collected after cyanide fumigation, 360; after sulphur fumigation, 291.

"Inspection of wharves and piers showed that rat-guarding regulations were being properly observed."

LEPER STATIONS.

Under the Leprosy Act (chapter 136, Revised Statutes 1906), the Department of Health administers two leper stations in Canada, one at Tracadie, N.B., the other at Bentinck Island, B.C.

Tracadie, N.B.—This lazaretto is in charge of Dr. J. A. Langis, medical superintendent. At the end of the fiscal year, March 31, 1927, there were eleven inmates being cared for as compared with ten in the previous year. Six of these are arrested cases. No deaths occurred during the period covered. There was one new admission, in November, 1926, a Russian woman from Blaine Lake, Sask. The following table furnishes particulars of the respective patients:—

| Patient | Age | Sex | Admitted | Nationality | Where from |
|--------------|-----|-----|----------------------|-----------------------------|---------------------|
| J.G..... | 62 | M. | April, 1897..... | Icelander..... | Winnipeg, Man. |
| J.S..... | 58 | F. | March, 1906..... | French Acadian..... | Tracadie, N.B. |
| P.D..... | 40 | M. | May, 1909..... | French Acadian..... | Lameque, N.B. |
| O.L..... | 81 | M. | October, 1910..... | French Acadian..... | Neguac, N.B. |
| B.T..... | 74 | F. | October, 1914..... | French Acadian..... | Portage River, N.B. |
| A.D..... | 28 | F. | July, 1918..... | French Acadian..... | Lameque, N.B. |
| J.D..... | 66 | M. | April, 1919..... | French Acadian..... | Lameque, N.B. |
| V. de L..... | 27 | F. | January, 1921..... | Scotch and French descent.. | Toronto, Ont. |
| K.S.L..... | 45 | M. | October, 1922..... | Chinese..... | Montreal, P.Q. |
| W.S..... | 36 | M. | September, 1925..... | Chinese..... | Montreal, P.Q. |
| J.P..... | 32 | F. | November, 1926..... | Russian..... | Blaine Lake, Sask. |

It will be seen that six of the inmates are French-Acadians. These are natives of Gloucester county, N.B., where leprosy first made its appearance in Canada. It is interesting to note that the last leper case which occurred in this district was admitted to the lazaretto eight years ago. Thus it may be assumed that leprosy having its origin among native-born Canadians is to-day virtually extinct.

The principal medicinal treatment of the active cases consists of the intramuscular injection of the ethyl esters of chaulmoogra oil, which oil is obtained from the seed of an East Indian tree. Dr. Langis reports as satisfactory progress as can be expected, and pays tribute to the devoted service to the inmates rendered by the nursing sisters of the Order of St. Joseph.

Bentnick Island, B.C. This leper station is in charge of Dr. C. P. Brown, medical superintendent of the quarantine station at William Head, B.C., to which Bentnick Island is adjacent. At the close of the fiscal year there were ten male patients being cared for, the number being unchanged from the previous year. These are classified as follows:—

| Patient | Age | Sex | Admitted | Nationality | Where from |
|------------|-----|-----|---------------------|------------------|-----------------|
| F.H..... | 41 | M. | August 28, 1916.... | Chinese..... | Vancouver, B.C. |
| C.K.W..... | 42 | M. | October 4, 1918.... | Chinese..... | Vancouver, B.C. |
| L.A..... | 30 | M. | November 28, 1918 | Chinese..... | Victoria, B.C. |
| L.B..... | 36 | M. | December 23, 1920 | Chinese..... | Vancouver, B.C. |
| A.B..... | 50 | M. | November 18, 1921 | Russian Jew..... | Winnipeg, Man. |
| C.K..... | 47 | M. | March 31, 1922.... | Chinese..... | Victoria, B.C. |
| J.L..... | 31 | M. | August 5, 1923.... | Chinese..... | Vancouver, B.C. |
| E.D..... | 33 | M. | January 31, 1924... | Doukhobor..... | Veregin, Sask. |
| M.J..... | 30 | M. | May 21, 1924..... | Chinese..... | Vancouver, B.C. |
| W.K.D..... | 42 | M. | October 28, 1925... | Chinese..... | Nanaimo, B.C. |

The condition of these patients may be summarized as follows:—

Four have clinical signs of present active disease.

Two have discharging sinus on feet, the result of damage done by the disease.

Three have no clinical signs of present active disease, but are bacteriologically positive.

One has no signs of present clinical active disease, and is bacteriologically negative.

Medicinal treatment consists of chaulmoogra oil capsules, with "moogrol" injected intramuscularly.

The lepers are housed in cottages, each with his own room and outfit, and look after themselves as far as practicable. Two male caretakers and a trained female nurse are in immediate charge of the leper colony, under the supervision of the quarantine medical officer, who visits the island at weekly intervals, or oftener if needed.

IMMIGRATION MEDICAL SERVICE

Ocean passengers, immigrants and non-immigrants (tourists, etc.), to the number of 133,494 were medically inspected at ports of Canada on the Atlantic and Pacific coasts during the fiscal year. In addition, 2,429 persons en route to Canada by way of the ports of New York and Boston were medically inspected by officers of the United States Public Health Service.

The following tables show (a) the monthly arrivals by ports, and (b) a comparison with the figures of the previous fiscal year.

The following table shows the number of persons medically certified at the respective ports as prohibited of entry to Canada under section 3 of the Immigration Act:—

| Ports | Insane, feeble-minded, etc. Section 3 (a) | Tuberculosis, loathsome or chronic infectious disease. Section 3 (b) | Physically defective—liable to become a public charge. Section 3 (c) | Constitutional psychopathic inferiority. Section 3 (k) | Minor physical defects— affecting ability to earn a living. Section 3 (m) | Totals |
|-------------------|--|---|---|---|--|--------|
| Quebec..... | 15 | 19 | 366 | 3 | 29 | 432 |
| Halifax..... | 11 | 9 | 119 | 2 | 24 | 165 |
| St. John..... | 2 | 4 | 113 | ..... | 1 | 120 |
| Montreal..... | ..... | 4 | 1 | ..... | ..... | 5 |
| Vancouver..... | 6 | 1 | 2 | 1 | ..... | 10 |
| Victoria..... | ..... | ..... | 1 | ..... | ..... | 1 |
| North Sydney..... | ..... | 2 | 7 | ..... | ..... | 9 |
| Totals..... | 34 | 39 | 609 | 6 | 54 | 742 |

Tables below show, by ports, the specific mental and physical diseases or defects for which the above persons were medically certified:—

IMMIGRATION ACT, SECTION 3 (a) AND (k)—PERSONS MENTALLY DEFECTIVE

| Disability | Quebec | Halifax | St. John | Vancouver | Totals |
|--|--------|---------|----------|-----------|--------|
| Section 3 (a)— | | | | | |
| Epilepsy..... | 1 | 2 | ..... | 1 | 4 |
| Feeble-minded..... | 4 | 3 | ..... | 1 | 8 |
| Idiocy..... | ..... | 1 | ..... | ..... | 1 |
| Imbecility..... | 3 | 1 | ..... | ..... | 4 |
| Insanity..... | 7 | 4 | 2 | 4 | 17 |
| Section 3 (k)— | | | | | |
| Constitutional psychopathic inferiority..... | 3 | 2 | ..... | 1 | 6 |
| Totals..... | 18 | 13 | 2 | 7 | 40 |

IMMIGRATION ACT, SECTION 3 (b)—PERSONS WITH TUBERCULOSIS, LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | Halifax | St. John | Montreal | Vancouver | North Sydney | Totals |
|---------------------|--------|---------|----------|----------|-----------|--------------|--------|
| Gonorrhoea..... | 6 | 1 | 1 | 1 | ..... | ..... | 9 |
| Ringworm..... | ..... | ..... | 2 | ..... | ..... | ..... | 2 |
| Sycosis barbae..... | 1 | 1 | ..... | ..... | ..... | ..... | 2 |
| Syphilis..... | 1 | ..... | ..... | 1 | ..... | ..... | 2 |
| Trachoma..... | 9 | 7 | ..... | 1 | 1 | ..... | 18 |
| Tuberculosis..... | 2 | ..... | 1 | 1 | ..... | 2 | 6 |
| Totals..... | 19 | 9 | 4 | 4 | 1 | 2 | 39 |

IMMIGRATION ACT, SECTION 3 (c) AND (m)—PERSONS PHYSICALLY DEFECTIVE

| Defects | Quebec | Halifax | St. John | Mont- real | North Sydney | Van- couver | Victoria | Totals |
|----------------------------------|--------|---------|----------|---------------|-----------------|----------------|----------|--------|
| Absence of members..... | 30 | 11 | 16 | | 1 | | | 58 |
| Albuminuria..... | | | 1 | | | | | 1 |
| Anaemia..... | 1 | | 1 | | 1 | | | 3 |
| Blindness, total or partial..... | 4 | 1 | | | | | | 5 |
| Blood vessels, defects of..... | 32 | 7 | 8 | 1 | | | | 48 |
| Bone, diseases of..... | | 1 | | | | | | 1 |
| Chest, diseases of..... | 9 | 2 | 1 | | | | | 12 |
| Chorea..... | 1 | | | | | | | 1 |
| Deafness, total or partial..... | 27 | 7 | 13 | | 1 | | | 48 |
| Deaf and dumb..... | 3 | | | | | | | 3 |
| Debility..... | | 6 | | | | | | 6 |
| Deformities..... | 75 | 24 | 28 | | 1 | | 1 | 129 |
| Dermatitis..... | | 1 | | | | | | 1 |
| Ear, diseases of..... | 8 | | | | | | | 8 |
| Epileptiform seizures..... | 1 | | | | 1 | | | 2 |
| Glandular conditions..... | 2 | | | | | | | 2 |
| Goitre..... | 3 | 6 | 2 | | | | | 11 |
| Heart conditions..... | 33 | 10 | 9 | | | | | 52 |
| Hernia..... | 20 | 1 | 3 | | | | | 24 |
| Infantile paralysis..... | | | | | | 1 | | 1 |
| Loss of power of members..... | 43 | 22 | 6 | | | | | 71 |
| Malaria, recurring..... | 2 | 2 | 2 | | | | | 6 |
| Marasmus..... | | | 2 | | | | | 2 |
| Nephritis..... | 2 | | | | | | | 2 |
| Nervous debility..... | | 1 | | | | | | 1 |
| Neurasthenia..... | 7 | 6 | | | | | | 13 |
| Nystagmus..... | | | 1 | | | | | 1 |
| Paralysis agitans..... | | | | | | 1 | | 1 |
| Poor physique..... | 8 | 4 | 3 | | | | | 15 |
| Pregnancy, illegitimate..... | 3 | 1 | 1 | | 1 | | | 6 |
| Rheumatism..... | 8 | 1 | | | | | | 9 |
| Senility..... | 1 | 17 | 1 | | | | | 19 |
| Speech, impediments of..... | 22 | 3 | 2 | | 1 | | | 28 |
| Uleers of stomach..... | | 1 | | | | | | 1 |
| Undescended testicles..... | | 1 | | | | | | 1 |
| Vision, defects of..... | 50 | 7 | 14 | | | | | 71 |
| Totals..... | 395 | 143 | 114 | 1 | 7 | 2 | 1 | 663 |

The following table has reference to ocean passengers (immigrant and non-immigrant) who, on arrival at the Canadian ports named, were detained for medical or surgical treatment until they were cured or fit to travel. The list includes those persons detained at the Savard Park Immigration Hospital, Quebec, and the Rockhead Immigration Hospital, Halifax, on account of minor infectious disease.

| Treated for | Quebec | Halifax | St. John | Vancouver | Totals |
|--------------------------|--------|---------|----------|-----------|--------|
| Abortion..... | 2 | 1 | 1 | | 4 |
| Abscess..... | 5 | 10 | 1 | | 16 |
| Appendicitis..... | 1 | 2 | | | 3 |
| Balanitis..... | | | | 1 | 1 |
| Boils..... | 1 | 10 | | | 11 |
| Bronchitis..... | 11 | 14 | 10 | | 35 |
| Carbuncle..... | | | 1 | | 1 |
| Cardial hypertrophy..... | | 1 | | | 1 |
| Cellulitis..... | 1 | 1 | | | 2 |
| Chaneroid..... | 1 | | | | 1 |
| Chickenpox..... | 42 | 3 | | | 45 |
| Childbirth..... | 6 | | 3 | | 9 |
| Cold, acute..... | 10 | | | | 10 |
| Conjunctivitis..... | 22 | 19 | 1 | 9 | 51 |
| Constipation..... | 1 | 2 | | | 3 |
| Convulsions..... | 1 | | | | 1 |
| Corneal ulcer..... | | 1 | | | 1 |

| Treated for | Quebec | Halifax | St. John | Vancouver | Totals |
|--------------------------|--------|---------|----------|-----------|--------|
| Corvza..... | | 1 | | | 1 |
| Cystitis..... | | 1 | 1 | | 2 |
| Debility..... | | 2 | | | 2 |
| Dermatitis..... | 1 | 1 | | | 2 |
| Dislocations..... | | 2 | | | 2 |
| Diphtheria..... | 1 | | 1 | | 2 |
| Eczema..... | | 2 | 2 | | 4 |
| Enteritis..... | 5 | 3 | | | 8 |
| Erysipelas..... | 5 | 1 | 1 | | 7 |
| Erythema..... | | 1 | | | 1 |
| Eye, diseases of..... | 1 | | | | 1 |
| Food rash..... | 3 | | | | 3 |
| Fractures..... | 6 | | 2 | | 8 |
| Furunculosis..... | 1 | | | | 1 |
| Gastric disturbance..... | 2 | 1 | | | 3 |
| Haemorrhage..... | | 1 | | | 1 |
| Herpes..... | | 1 | | | 1 |
| Impetigo..... | 3 | 9 | 1 | | 13 |
| Indigestion..... | 2 | | | | 2 |
| Influenza..... | 8 | 19 | 3 | | 30 |
| Injuries..... | 1 | | | 1 | 2 |
| Intestinal colic..... | | 1 | | | 1 |
| Iritis..... | | 1 | | | 1 |
| Jaundice..... | | 1 | | | 1 |
| Keratitis..... | 3 | | | | 3 |
| Measles..... | 38 | 3 | | | 41 |
| Menorrhagia..... | | 2 | | | 2 |
| Mumps..... | 1 | 1 | | | 2 |
| Oedema..... | | 1 | | | 1 |
| Otitis media..... | 5 | 1 | 1 | | 7 |
| Paratyphoid..... | 1 | | | | 1 |
| Pharyngitis..... | 3 | 1 | | | 4 |
| Pleurisy..... | 1 | | | | 1 |
| Pneumonia..... | 12 | 15 | 5 | | 32 |
| Puerperal sepsis..... | | | 1 | | 1 |
| Pyrexia..... | 2 | 6 | | | 8 |
| Rineworm..... | 1 | 1 | | | 2 |
| Scabies..... | 7 | | | | 7 |
| Scalds..... | | | 1 | | 1 |
| Scarlet fever..... | 6 | 1 | | | 7 |
| Sensitiveness..... | | 1 | | | 1 |
| Septicemia..... | 1 | | | | 1 |
| Septic members..... | 5 | 11 | | | 16 |
| Sprains..... | 6 | | | | 6 |
| Tonsillitis..... | 9 | | | | 9 |
| Toxemia..... | 1 | | | | 1 |
| Ulcers..... | 1 | | | | 1 |
| Urticaria..... | 1 | 1 | | | 2 |
| Vaccinal infection..... | | 2 | | | 2 |
| Wounds..... | 3 | | 1 | | 4 |
| Totals..... | 248 | 158 | 37 | 11 | 454 |

Of the immigrant and non-immigrant ocean passengers who, on account of apparent mental or physical defects, were detained for secondary examination, the following were either (a) released as not coming within the "prohibited classes" referred to in Section 3 of the Immigration Act, or (b) entered on record cards as having minor defects only. The enumeration includes those persons held at Quebec and Halifax as contacts of minor infectious disease cases.

(a) PERSONS DETAINED FOR MEDICAL OBSERVATION, BUT SUBSEQUENTLY RELEASED AS "NEGATIVE"

| Reason for Detention | Quebec | Halifax | St. John |
|-------------------------|--------|---------|----------|
| Observation, chest..... | 5 | | 4 |
| " chickenpox..... | 25 | 5 | |
| " diphtheria..... | 17 | | |
| " epilepsy..... | 1 | | |
| " eyes..... | 1 | 2 | 2 |
| " fractured wrist..... | 1 | | |
| " general..... | 24 | 26 | 13 |
| " hand..... | | 1 | |
| " heart..... | | 1 | 3 |
| " measles..... | 4 | 6 | |
| " mental..... | 13 | 1 | 7 |
| " nails..... | | 1 | 1 |
| " nephritis..... | 1 | | |
| " nervous system..... | 2 | | |
| " pyrexia..... | 1 | | 1 |
| " rash..... | 1 | | 1 |
| " scalp..... | 6 | | 5 |
| " scarlet fever..... | 13 | 2 | |
| " skin..... | | 1 | |
| " smallpox..... | | 5 | |
| Totals..... | 116 | 51 | 37 |

(b) CASES RECORDED FOR MINOR DEFECTS

| | |
|----------------|-----|
| Quebec | 513 |
| Halifax | 137 |
| St. John | 93 |
| Total | 743 |

IMMIGRATION MEDICAL SERVICE OVERSEAS

Of the 30,186 prospective emigrants to Canada who submitted medical certificates from roster doctors for review by the Canadian Immigration medical officers in London, or were examined personally by the latter officers, 2,289 were found to come within the "prohibited classes" set out in section 3 of the Immigration Act, due to physical or mental defects. Decision as to their acceptance or rejection as emigrants to Canada rests with the Department of Immigration, the officers of the Department of Health merely acting as medical advisers, as at Canadian ports of landing.

| | |
|--|--------|
| Medical certificates from roster doctors reviewed..... | 30,186 |
| Personal examinations by Immigration medical advisers..... | 1,893 |
| Certifications under Immigration Act..... | 2,289 |

The following summarized statement indicates the diseases or defects for which certificates were issued:—

SECTION 3 (a)—MENTAL DISEASES

| | |
|-------------------------|-----|
| Epilepsy | 23 |
| Feeble-minded | 119 |
| Idiocy | 2 |
| Imbecility | 5 |
| Insanity | 7 |
| Previously insane | 17 |
| Total | 173 |

SECTION 3 (b)—LOATHSOME AND CONTAGIOUS DISEASES

| | |
|-----------------------------------|-----|
| Eczema, marked | 2 |
| Psoriasis, marked | 1 |
| Ringworm | 19 |
| Sycosis barbae | 3 |
| Trachoma | 92 |
| Tuberculosis, adenitis | 12 |
| Tuberculosis, lupus | 9 |
| Tuberculosis, pulmonary | 45 |
| Tuberculosis, surgical | 13 |
| Venereal disease, gonorrhœa | 3 |
| Venereal disease, syphilis | 9 |
| Total | 208 |

SECTION 3 (k)

| | |
|---|----|
| Constitutional psychopathic inferiority | 35 |
|---|----|

SECTION 3 (c)—PHYSICAL DISEASES AND DEFECTS

| | |
|---------------------------------|-------|
| Absence of members | 54 |
| Anaemia | 8 |
| Blindness | 7 |
| Blood vessels, defects of | 50 |
| Bone, diseases of | 13 |
| Chest conditions | 63 |
| Chorea | 3 |
| Deaf and dumb | 9 |
| Deafness | 131 |
| Debility | 38 |
| Deformities | 229 |
| Dermatites | 29 |
| Diabetes | 1 |
| Disseminated sclerosis | 1 |
| Ear, diseases of | 16 |
| Encephalitis | 1 |
| Encuresis | 4 |
| Glandular conditions | 8 |
| Goitre | 20 |
| Heart conditions | 231 |
| Hernia | 20 |
| Joints, diseases of | 6 |
| Keratitis, interstitial | 1 |
| Loss of power of members | 36 |
| Malaria | 5 |
| Nephritis | 22 |
| Neurasthenia | 36 |
| New growths | 5 |
| Paralysis agitans | 1 |
| Poor physique | 125 |
| Pregnancy | 2 |
| Rheumatism | 26 |
| Senility | 4 |
| Speech, impediments of | 38 |
| Syphilis, tertiary | 1 |
| Vision, defects of | 183 |
| Total | 1,457 |

SECTION 3 (m)

| | |
|------------------------|-----|
| Mental defects | 32 |
| Physical defects | 384 |
| Total | 416 |

LABORATORY OF HYGIENE

The laboratory was called upon during the year to carry out a sanitary survey of the chief clam bed areas in the province of New Brunswick, centering around Shediac and Cocagne. With this survey were associated bacteriological examinations of clams taken from representative beds. This survey, like that of previous ones on oyster beds, was undertaken to meet the requirements of the export trade to the United States, where very strict sanitary regulations are imposed by that country upon the importation of shell fish in the raw state.

In collaboration with the Food and Drugs laboratory and that of Customs and Excise, numerous examinations throughout the year have been made in respect to canned goods, dairy products, biological products and raw foods.

In co-operation with the sanitary engineer, the laboratory has carried out numerous bacteriological examinations of drinking-water samples obtained from vessels of various sorts engaged in trade and passenger traffic between Canadian and United States ports.

Critical inspections have been carried out in reference to the equipment and general upkeep of bacteriological laboratories in connection with the quarantine service. Apparatus and equipment in general have been carefully overhauled, shortages made good and everything made ready for operation on the shortest possible notice, where bacteriological investigation may be deemed necessary in reference to outbreaks of communicable disease among immigrants landing on our shores.

Standardization tests have been carried on on a considerable number of samples of coal-tar disinfectants, this largely on behalf of Government departments seeking guidance in the choice of reliable disinfectants.

A second report was made upon the potency of tinctures of digitalis and strophanthus as found upon the Canadian market. As before, a considerable variation in the strength of these samples was observed.

Publication has been made of an article dealing with the hydrogen-ion standardization of bacteriological media. Further work along these lines is being prosecuted.

DIVISION OF VENEREAL DISEASE CONTROL

During the fiscal year 1926-27 the sum of \$119,132.44 was distributed among the provinces for the work of venereal disease control, the amount allocated to the provinces, \$125,000, being the same as for the preceding year. The amount was allocated and distributed as follows:—

| | Allocation | Expenditure |
|--|------------|-------------|
| | \$ cts. | \$ cts. |
| Administrative purposes by the Department of Health..... | 5,000 00 | 293 66 |
| Grant to the Canadian Social Hygiene Council..... | 5,000 00 | 5,000 00 |
| Province of— | | |
| Alberta..... | 7,711 18 | 7,711 18 |
| British Columbia..... | 6,874 20 | 6,874 20 |
| Manitoba..... | 7,995 07 | 7,995 07 |
| New Brunswick..... | 5,082 78 | 5,082 78 |
| Nova Scotia..... | 6,864 43 | 6,864 43 |
| Ontario..... | 38,443 12 | 38,443 12 |
| Prince Edward Island..... | 1,161 22 | |
| Quebec..... | 30,941 48 | 30,941 48 |
| Saskatchewan..... | 9,926 52 | 9,926 52 |
| Total..... | 125,000 00 | 119,132 44 |

There are fifty-six clinics in operation throughout the provinces. In addition, there are a number of hospitals and institutions to which drugs are supplied for the free treatment of venereal disease. These hospitals and institutions make monthly returns to the provincial authorities. Patients at outlying points are treated by arrangement with the nearest physician. The free clinics, coupled with the treatment of inmates of penal institutions, have proved to be the most effective means so far instituted for the limitation of the spread of the disease. Treatment is being adequately carried out.

Law enforcement, so far as it relates to women who are sentenced to penal institutions, is satisfactory and is proving effective.

Following up of the patient to ensure treatment until cured and the examination of contacts is being conducted with some degree of success in the larger centres of population, but not so effectively in the smaller places.

Educational work is now somewhat negligible. This year there were issued 90,805 pieces of literature by this department. Just what effect educational efforts have met with in preventing immoral relationships is difficult to say. Their effect is not apparent as yet.

The Canadian Social Hygiene Council, which has been carrying on a campaign against the venereal diseases for some years, is expanding into a general public health council. General health topics will be publicly discussed and social hygiene given a position proportionate to its merits.

DIVISION OF CHILD WELFARE

Opportunities for co-operation with other departments of the Dominion Government, especially with the Department of Immigration and Colonization, the Department of the Interior, the Department of Trade and Commerce and with all the Provincial Authorities in Health, Child Welfare and Vital Statistics have increased during the year. The preparation of the Hospital Map of Canada and the securing and compiling of material for the Maternal Mortality Enquiry has increased the opportunities for co-operation.

Correspondence with England and Wales, Scotland, the Irish Free State, Newfoundland and with distant parts of the British Empire, as well as with other countries, has occupied a good deal of time and attention.

The most important undertaking during the year has been the preparation of a large amount of material obtained by co-operation with the provincial authorities and the medical profession in regard to maternal deaths in Canada. The co-operation received and the interest taken in this Enquiry, not only by those directly concerned but by the general public, has been beyond all expectation. A preliminary report of the whole Enquiry was presented to the Second Conference on Medical Services in Canada which was held in the House of Commons under the patronage of the minister on March 30, 1927. Every effort is being made to complete the final report at an early date.

MATERNAL MORTALITY ENQUIRY REPORT

A request was made at the Second Conference on Medical Services in Canada that the final report should be completed and made available to all members of the profession as soon as possible, and it was also requested that, if possible, a report in a somewhat different form should be made available to the general public. This last request was supported by a resolution passed by the National Council of Women of Canada at a meeting of their Executive Committee at Ottawa on March 31, 1927.

HOSPITAL MAP OF CANADA

A List of the Hospitals of Canada was prepared from information supplied by the provincial authorities. The map was compiled from information supplied in the same way. The final proof was received from the King's Printer on April 23, 1926, and proofs were sent to all persons who had contributed information. The final proof was received, revised, approved by the deputy minister and returned for printing and publication on July 24, 1926; 10,000 copies of the map were received September 17, 1926.

Request-cards for this publication were sent to all legally-qualified medical practitioners in Canada, about 8,000 in number. The total number of request-cards returned up to September 30, 1926, was 2,883. A few have been received since that date bringing the total number up to about 3,000.

Although proofs were sent to all provincial authorities and although the superintendent of each hospital was personally written to, it was found that seven hospitals had been omitted from the list.

YOUNG PERSONS IN PENITENTIARIES

This matter has been brought forward on several occasions but progress has been slow. A conference suggested by Judge Coatsworth took place on May 27, 1926. Those present included Judge Coatsworth, Hon. W. F. Nickle, Attorney-General of Ontario, Judge Mott, and Dr. Lavell. The Attorney-General of Ontario undertook to write to the Hon. Ernest Lapointe, Minister of Justice, upon the subject of providing better care and training for juvenile adults in penitentiaries.

IMMIGRANT CHILD WELFARE

The care of children not in their own homes has received attention during the year and it is now intended to issue a publication comprising the "Memorandum on the Care of Children Not in Their Own Homes", with special reference to children coming from overseas, as approved by the provincial superintendents for child welfare work, and also a directory of all government officials in the Dominion and provincial Governments who have charge of this work and work relating to it, and a similar directory of all voluntary societies engaged in the same work.

Correspondence on this matter has been regular and continuous but has been at the same time much delayed and it has for some reason been difficult to get the necessary information. However, it is hoped that the publication will be issued at an early date.

DISABLED CHILDREN

Orthopedic Classes or Auxiliary Classes for Disabled Children with transportation for the pupils have been established in Ottawa and in Toronto during the year.

ESKIMO INFANTS AND CHILDREN

At the request of Dr. Duncan Campbell Scott, Deputy Superintendent General of Indian Affairs, a memorandum in regard to the care and feeding of Eskimo infants and young children was prepared. The deputy superintendent general stated that a copy of this memorandum along with a copy of "The Canadian Mother's Book" and "Supplement" would be placed at all the far northern posts.

Conferences on this subject have taken place with officials of the different departments concerned and others during every month of the present year and the subject received a great impetus from the visit of Knud Rasmussen to Ottawa on December 6.

OUTPOST HOMES

The work of the Education Department of Ontario with regard to school cars intended to provide for the education of children in outpost homes in northern Ontario has been a matter of importance during the year. Two school cars were placed in operation on September 18, 1926. Each car contains a school room with fourteen seats, also residential accommodation for the teacher. The railways supply fuel, heat and refrigeration at the expense of the Government. The Canadian National Railways has provided a "School Siding" at eight points on the line and the Canadian Pacific Railway has provided nine "School Sidings." The total number of pupils served by the Canadian Pacific Railway car, which is on the Cartier-Chapleau Division, is 71, and the total number served by the Canadian National Railways, on the Capreol-Foleyet Division, is 72. Seven Indian children are included in the above. Co-operation with the teachers for the school cars has been established during the year.

The system of Correspondence Classes established by the same department in Ontario has offered another opportunity for co-operation of which we immediately availed ourselves.

PUBLICATIONS

The Hospital Map of Canada was published, 10,000 copies were received and these were distributed chiefly by means of request-cards which were forwarded to the medical profession and others. The publication was well received and was out of print on or about March 31, 1927. A number of copies were utilized by the Department of Immigration and Colonization, who had made a special request for the immediate printing of this publication as it was felt that it was too important to be delayed until the final Report of the Maternal Mortality Enquiry should be ready.

In January, 1927, the manuscript for a new edition of "The Canadian Mother's Book," to be known as the Confederation Diamond Jubilee Edition, was sent to the Government Printing Bureau. For various reasons it was not found possible to publish this new edition before March 31.

The revision was begun on July 15, 1926, and the first galley proof was received February 8, 1927.

One of the State Staff Nurses of Pennsylvania who has some Canadians in her district wrote to ask for a supply of "Little Blue Books" for distribution. Fifty request-cards were sent in the usual way with a letter of thanks for this courtesy.

Requests were also received from the Federated Malay States and from Manjirenji, P.O. Zaka, Fort Victoria, Southern Rhodesia.

IMPERIAL BABY WEEK TROPHY

At the request of the National League for Health, Maternity and Child Welfare, London, England, assistance was given as in previous years to make known their Imperial Competition for Baby Week. The Competition this year was for the municipality which had done the most effective child welfare work.

HOSPITALIZATION AND SANITATION

HOSPITALIZATION

The activities of the division, advising on planning of hospitals in various parts of the Dominion are increasing considerably as evidenced in the advice sought by the provincial governments as also various hospital boards. The Hamilton Memorial Hospital, North Sydney, C.B., trustees were advised on their problems, tentative plans and schemes being furnished.

The scheme for hospital and doctor's residence at Ile-a-la Crosse, Sask., was further developed and the division co-operated to the extent of furnishing plans, specifications and data of a type unique in hospital planning, thus enabling the project to be consummated.

The Marine Hospital, Sydney, N.S., having become somewhat out-dated from the viewpoint of modern hospital planning was taken under advisement and plans prepared for alterations and additions both covering ward accommodation, sanitation, and heating facilities with a view of conforming to the latest practices covering such institutions.

Point Edward Quarantine Station having been abolished, provision was made for an infectious diseases unit to be built in conjunction with the Marine Hospital, Sydney. Therefore, the division prepared plans and specifications accordingly for this work. One very interesting feature in connection with this unit is that the construction represents the latest note in insulating properties inasmuch as the floors, walls, and roofs are filled with a gypsum compound thereby conserving heat and resisting low temperatures so prejudicial to the therapeutic value of hospitals of this description. The windows in this building have been so arranged that they will ventilate the various wards, effectively screen from flies, and permit storm sashes all in one frame, this type of ventilation, fly control, and double window method, being the pioneer of such design in the Dominion.

Many enquiries have been received in furtherance of the data furnished covering the institutional care of mental defectives, and it is the intention at some time to publish a brochure covering this phase of hospitalization.

The demand for the publication covering "Planning of Small Community Hospitals" is daily increasing in view of the insistent demands made for hospitalization by modern methods in the rural districts.

Intensive work on the various buildings and physical features was accomplished at the quarantine stations in conjunction with the Division of Quarantine, with the result that greater efficiency has been attained.

The division planned new food and drug laboratories in Toronto, which laboratories embody equipment, refrigeration, etc., comparable to the requirements of the service.

The Laboratory of Hygiene, owing to its increasing activities, called for an incubator room and, in view of the latest scientific methods of construction, research work was carried out, having in mind the fundamental essential of maintaining an equable temperature. This was accomplished to a remarkable degree and has interested many professors from the various universities both throughout the Dominion and the United States.

Fire protection for buildings, more particularly hospitals and institutions in the outlying regions in the northern part of the Dominion, is receiving the very careful study of the division, and it is hoped that, before long, fire-resisting paints and stains will be on the market thereby insuring a greater measure of protection from the ravages of fire which have proved so costly and disastrous in the past.

SANITATION

The interest shown by the people in sewage disposal and water supplies where municipal systems do not obtain has been outstanding. Enquiries have been received from every province emphasizing the need for such publications as those issued by the department, and, in all cases as in a vast number of parallel problems, the Division has furnished information and data which enabled the enquirers to overcome satisfactorily their difficulties and to enjoy the results of

modern methods now practised in phases of such sanitation. The following excerpts from correspondence received indicate the diversity of information sought from time to time by the public, *i.e.*—

"SASKATCHEWAN.

"I am enclosing a diagram of the layout of my well, house and sewage system to be installed. The water level is seventy feet from the top of the ground. If I should dig a hole three feet wide down to the gravel (which is 35 feet of hard pan or dirt, and there is 35 feet of gravel before getting to the water level), and fill in about 15 feet of stone or rocks and curbed the rest of the way up and covered, would the drainage from the house off the water in the well 200 feet away? How large would the sewage pipe have to be to carry same from the house 60 feet away, and what slope would the drainage pipe have to be?"

"ALBERTA.

"Could you please send me a safe answer to the following problem. How could I establish a pumping system (first proof) in the following circumstances? I live in a place where potable water is not available before 60 or 70 feet and even then it is full of mud. It cannot keep good very long, and moreover I have no system of drilling. There is a good lake at 400 feet from my house and stables, and the only way of solving the problem is to take water from that lake."

"ONTARIO.

"We are contemplating installing septic tanks at our mill at Kapuskasing, Ont., where we will be employing from 500 to 700 persons, and would be very glad to receive any published pamphlets and other information you would be kind enough to let us have, regarding tanks of the required capacity. Kindly let us have this in duplicate in order that we may supply our Engineer with a copy."

"Two years ago we put in a septic tank at our cheese factory to try to remedy the evil of running all waste into a watercourse which runs past and is spoiling the water used by some farmers for stock purposes. I might state that we manufacture from ninety to one hundred tons of cheese, and also separate our whey. No whey is allowed to run into the tank, but all the washings do. We have a three compartment tank, each five feet every way, the outlet running direct to the creek. The ground around is clay, and rather flat, thereby not leaving much chance for side drainage. I would like to know if there is any way in which we could have it fixed to give better results as the neighbours are beginning to complain."

"NOVA SCOTIA.

"I would esteem it a favour if you could supply me with literature dealing with the construction of septic tank or other method of sewage disposal for individual houses and institutions. Where I am intending to build is in a rural place where sewers and running water are not provided by the community. So individual efforts are necessary."

"NEW BRUNSWICK.

"I should be much obliged for literature, if you publish such, concerning drainage of country houses. We are about to put in sewage connections from the manse, and are ignorant about procedure. I am advised to write your department and I do so hopefully."

"BRITISH COLUMBIA.

"I have been advised that you will give me information as how to best make a septic tank for five people occupying a seven roomed house. I intend to build a good brick house in Salmon Arm City this coming fall; while the city has excellent water, it has no sewerage system that I know of, so I'll have to arrange a septic tank of my own, and I want to be prepared as to how wide, how deep and how to line it with concrete or wood or brick. How to arrange inlet and outlet. I'd be thankful for the advice if it lies in your power to give it to me."

"MONTANA, U.S.A.

"I live on White Mud river, and we use the water from the river for cooking and put up ice for drinking. In August, 1926, my two children and myself had typhoid fever. Do you think we got it from using river water?"

"I saw in your Publication No. 18 on Sanitation Water Supplies, to use chloride of lime. Do you think this would make the water fit to use and free of typhoid germs? I would appreciate having you write to me and give me some more information on this. I am giving an address in United States as we cannot cross the river to a Canadian Post Office."

Municipalities still desire to be advised both on their sewage and water problems and *en passant* Swift Current municipality, Sask., was furnished with information, by request, covering purification, filtration, and sedimentation for water supplies.

The Canadian Tuberculosis Association consulted the division upon the compilation of a brochure covering ventilation which they desired to publish and distribute throughout the Dominion.

The provincial medical officers of health had become impressed by the insistent urge made by the public as to the necessity and value of pasteurizing milk. The Canadian Council of Child Welfare were also forcibly insistent that such information should be distributed at as early a date as possible. The division therefore compiled a brochure under the caption of "Pasteurization of Milk for small communities" covering the questions incidental thereto in a comprehensive manner, i.e.:—

"The history of pasteurization, how it can be applied to the home, undesirable conditions under which milk is produced, dangers of mishandling by the producers and carriers, hygienic milk pails, milk houses, chemical changes produced by pasteurization, the direct relationship of unpasteurized milk to infant mortality, modern pasteurizing outfits, hygienic bottle washing, standard ordinances, and illustrations of hygienic barns, etc."

This publication is being used by the various colleges throughout the Dominion, the United States, and by the city and municipal authorities as a text book. Appreciation shown by these authorities may be gathered by one or two excerpts as follows:—

"GUELPH, ONT., ONTARIO AGRICULTURAL COLLEGE.

"I could distribute two dozen more copies amongst dairy students and others interested in dairy sanitation, as there is quite a demand for sound information on this subject and your publication cannot be bettered for this purpose."

"PETERBOROUGH, ONT.

"Mr. — is considering the installation of a small pasteurizing plant and your bulletin is really the finest piece of literature that is published covering this work for small plants."

"UNIVERSITY OF TORONTO.

"If available for distribution, would you please be kind enough to let us have 215 copies of publication No. 36, 'Pasteurization of Milk for Small Communities.' We desire to place a copy of this valuable little pamphlet in the hands of all of our students."

The development of housing throughout the Dominion would appear to still be holding the attention of the public, inasmuch as day after day inquiries are received for advice and standard plans covering small houses in outlying districts.

FINANCIAL STATEMENT

SUMMARY OF EXPENDITURE FOR THE FISCAL YEAR 1926-27

| Service | Gross Expenditure | | Refunds | Net Expenditure | |
|--|-------------------|------|-----------|-----------------|------------|
| | \$ | cts. | \$ | cts. | \$ cts. |
| Civil Government Salaries..... | 157,346 | 06 | | | 157,346 06 |
| Civil Government Contingencies..... | 52,610 | 77 | 3,307 61 | | 49,303 16 |
| Food and Drugs..... | 74,328 | 91 | 1,184 27 | | 73,144 64 |
| Opium and Narcotic Drugs..... | 32,020 | 22 | 1,020 59 | | 30,999 63 |
| Proprietary or Patent Medicines..... | 1,655 | 63 | | | 1,655 63 |
| Pollution of Inland Waters..... | 5,400 | 00 | | | 5,400 00 |
| Marine Hospitals, etc..... | 193,420 | 62 | 3,496 70 | | 189,923 92 |
| Quarantine..... | 168,005 | 60 | 805 04 | | 167,200 56 |
| Leprosy..... | 21,760 | 66 | | | 21,760 66 |
| Public Works Health Act..... | 2,955 | 80 | | | 2,955 80 |
| Immigration Medical Inspection..... | 78,323 | 97 | 238 50 | | 78,085 47 |
| Laboratory of Hygiene..... | 5,130 | 98 | 170 85 | | 4,960 13 |
| Venereal Diseases..... | 119,132 | 44 | | | 119,132 44 |
| Gratuities, Civil Service Act, 1918, Sec. 30..... | 170 | 00 | | | 170 00 |
| Canadian Council on Child Welfare..... | 5,000 | 00 | | | 5,000 00 |
| Canadian Social Hygiene Council..... | 10,000 | 00 | | | 10,000 00 |
| Canadian Tuberculosis Association..... | 25,000 | 00 | | | 25,000 00 |
| Canadian National Committee on Mental Hygiene..... | 10,000 | 00 | | | 10,000 00 |
| Victorian Order of Nurses..... | 10,000 | 00 | | | 10,000 00 |
| | 972,261 | 66 | 10,223 56 | | 962,038 10 |

REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL YEAR 1926-27

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|---------------|----------|-------------|
| | \$ cts. | \$ cts. | \$ cts. |
| "A"—Food and Drugs..... | 5,985 51 | 10 00 | 5,975 51 |
| "B"—Opium and Narcotic Drugs..... | 13,708 40 | 725 00 | 12,983 40 |
| "C"—Patent Medicines..... | 7,012 50 | 742 50 | 6,270 00 |
| "D"—Sick Mariners' Dues..... | 196,141 88 | 1,061 60 | 195,080 28 |
| "E"—Casual Revenue..... | 48,250 83 | | 48,250 83 |
| | 271,099 12 | 2,539 10 | 268,560 02 |

"A"—FOOD AND DRUGS NET REVENUE, 1926-27

| | Analysis Fees | Penalties | Costs | Total |
|-----------------------|---------------|-----------|---------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 5 00 | 175 00 | 40 00 | 220 00 |
| New Brunswick..... | 10 00 | | | 10 00 |
| Quebec..... | 5 00 | 920 00 | 260 00 | 1,185 00 |
| Ontario..... | 2,895 00 | 590 00 | 360 51 | 3,845 51 |
| Manitoba..... | 75 00 | | | 75 00 |
| Alberta..... | | 150 00 | 60 00 | 210 00 |
| British Columbia..... | 5 00 | 325 00 | 100 00 | 430 00 |
| | 2,995 00 | 2,160 00 | 820 51 | 5,975 51 |

"B"—OPIUM AND NARCOTIC DRUGS NET REVENUE, 1926-27

| | Business Licenses | Import Licenses | Export Licenses | Penalties | Seizures | Total |
|-----------------------|-------------------|-----------------|-----------------|-----------|----------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 90 00 | | | 50 00 | | 140 00 |
| New Brunswick..... | 80 00 | | | 225 00 | | 305 00 |
| Quebec..... | 1,065 00 | 280 00 | 30 00 | 3,949 35 | 445 25 | 5,769 60 |
| Ontario..... | 1,120 00 | 110 00 | 20 00 | 3,494 80 | | 4,744 80 |
| Manitoba..... | 230 00 | | | 680 00 | | 910 00 |
| Saskatchewan..... | 55 00 | | | 225 00 | | 280 00 |
| Alberta..... | 105 50 | | | 135 00 | | 240 00 |
| British Columbia..... | 154 00 | 10 00 | | 430 00 | | 594 00 |
| | 2,899 00 | 400 00 | 50 00 | 9,189 15 | 445 25 | 12,983 40 |

"C"—PATENT MEDICINES NET REVENUE, 1926-27

| | Penalties | Registration Fees at \$2 each | License Fees at \$1 each | Total |
|---------------------------|-----------|-------------------------------|--------------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 8 00 | 48 00 | 56 00 |
| New Brunswick..... | | 30 00 | 135 00 | 165 00 |
| Prince Edward Island..... | | 6 00 | 4 00 | 10 00 |
| Quebec..... | 10 00 | 320 00 | 1,429 00 | 1,759 00 |
| Ontario..... | 35 00 | 449 00 | 2,146 00 | 2,630 00 |
| Manitoba..... | | 28 00 | 168 00 | 196 00 |
| Saskatchewan..... | | 30 00 | 57 00 | 87 00 |
| Alberta..... | | 56 00 | 93 00 | 149 00 |
| British Columbia..... | | 34 00 | 177 00 | 211 00 |
| Foreign..... | | 146 00 | 861 00 | 1,007 00 |
| | 45 00 | 1,107 00 | 5,118 00 | 6,270 00 |

DEPARTMENT OF HEALTH

"D"—SICK MARINERS' DUES REVENUE, 1926-27

| | Total Revenue | Refunds | Net Revenue |
|---------------------------|------------------|----------|----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 50,251 44 | 72 06 | 50,179 38 |
| New Brunswick..... | 22,196 99 | 109 26 | 22,087 73 |
| Prince Edward Island..... | 866 00 | 16 02 | 849 98 |
| Quebec..... | 51,442 34 | 415 66 | 51,026 68 |
| British Columbia..... | 71,385 11 | 448 60 | 70,936 51 |
| | 196,141 88 | 1,061 60 | 195,080 28 |

"E"—CASUAL REVENUE, 1926-27

| | Total |
|---|-----------|
| | \$ cts. |
| Fumigation of ships..... | 13,077 12 |
| Hospital care of passengers..... | 15,281 00 |
| Department of National Revenue, use of launch <i>Evelyn</i> | 1,800 00 |
| Refunds of previous years' expenditure..... | 40 43 |
| Sundry sales..... | 18,052 28 |
| | 48,250 83 |

DOMINION OF CANADA

REPORT

OF THE

DEPARTMENT OF HEALTH

FOR THE

FISCAL YEAR ENDED MARCH 31, 1928



OTTAWA
F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1929

*To His Excellency the Right Honourable Viscount Willingdon, G.C.S.I.,
G.C.M.G., G.C.I.E., G.B.E., Governor General and Commander in Chief
of the Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to lay before Your Excellency the Report of the Department of Health of Canada for the fiscal year ended March 31, 1928.

I have the honour to be, sir,

Your Excellency's most obedient servant,

J. H. KING,

Minister of Health.

OTTAWA, August 1, 1928.

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REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE FISCAL YEAR ENDED MARCH 31, 1928

OTTAWA, July 14, 1928.

Hon. J. H. KING, M.D.,
Minister of Health,
Ottawa.

Sir,—I have the honour to report on the Department of Health for the year ended March 31, 1928, under the following headings:—

1. Food and Drug Division.
2. Narcotic Division.
3. Proprietary or Patent Medicines.
4. Pollution of the Inland Waters of Canada.
5. Marine Hospitals Service.
6. Quarantine Service (including Leper Stations).
7. Immigration Medical Service.
8. Laboratory of Hygiene.
9. Venereal Disease Control.
10. Child Welfare.
11. Hospitalization and Sanitation.
12. Financial Statement.

J. A. AMYOT,
Deputy Minister of Health.

FOOD AND DRUG DIVISION

This was a year of progress with outstanding developments in connection with legislation and improvement in laboratory services. The Food and Drugs Act was amended to increase its usefulness and maintain a measure of protection to the purchasing consumer for whose benefit it was clearly intended.

By this amendment the statement of net contents, in terms of weight, measure, count, is required on all packages of food or drugs weighing two ounces or more, gross, whether such packages are sealed or not, excepting certain containers legalized by the Meat and Canned Foods Act. Deception by slack fill is also covered. The section of the Act of 1920 dealing with misbranding of foods was extended to cover drugs as well. Provision was made for control of drugs such as digitalis, ergot, strophanthus, vaccines, sera, tissue preparations such as pituitary extract, and arsenicals to be used for treatment by injection. For these, biological tests are necessary and it will take considerable time to develop a complete system of licensing, inspection and testing. Judging from the quality of these drugs as sold in Canada, there was a decided need for this extension to the Act.

In the revision of the statutes the Honey Act and the Maple Products Act were made to appear as Parts II and III, respectively, of the Food and Drugs Act.

Laboratory Services.—A laboratory has been opened in Toronto, in order to meet the increasing needs of a large centre of population and a very heavy port of entry. This will not only make the inspection service more effective, but will considerably reduce delays and expenses. Laboratory services are now provided at the following district centres: Halifax, Montreal, Ottawa, Toronto, Winnipeg and Vancouver.

The following table summarizes the laboratory work for this year:—

SAMPLES EXAMINED IN THE FOOD AND DRUG LABORATORIES

| Nature of Samples | LABORATORIES | | | | | |
|--|--------------|---------|----------|----------|----------|-----------|
| | Ottawa | Halifax | Montreal | Toronto* | Winnipeg | Vancouver |
| From Inspectors of Food and Drugs..... | 1,213 | 1,187 | 1,295 | 219 | 586 | 2,265 |
| Department of Agriculture. | 325 | 20 | 574 | ..... | 51 | 376 |
| Royal Canadian Mounted Police..... | 207 | ..... | 62 | 4 | 58 | 91 |
| Other departments of Government**..... | 126 | 13 | ..... | ..... | 1,116 | 134 |
| Miscellaneous..... | 51 | ..... | 86 | 2 | 4 | 8 |
| | 1,922 | 1,220 | 2,017 | 225 | 1,815 | 2,874 |

Grand total.....10,073

* Six week's operation.

** Soldiers' Civil Re-establishment, National Defence, National Revenue, Marine and Fisheries, Mines, Post Office.

Food and Drug Inspection.—The twenty-six inspectors of food and drugs reported a total of one hundred and fifty-four prosecutions during the year. Of these ninety-nine were for meat and meat products, resulting very largely from an effort to enforce the regulation respecting the use of chemical preservatives and colouring matter in sausage and hamburger steak. The remaining prosecutions cover maple products, soft drinks, spices and drugs. Fines, fees and costs collected amounted to \$11,178.30. It is to be remembered that in administering the Act all possible effort is made to secure compliance with the law without resorting to prosecution. It is only where adulteration or misbranding is wilful, persistent or dangerous, that legal proceedings are instituted. The number of prosecutions does not, therefore, fully portray the activities of the inspection.

FOODS

The following comments are offered respecting some of the more important items in connection with the work on foods.

Baking Powder.—During the year, twenty-eight samples of baking powder and baking powder materials were examined, chiefly for available carbon dioxide and freedom from excessive amounts of metallic impurities. Warning was deemed necessary to one manufacturer because the finished product was slightly substandard. Statement of net weight was omitted from another line. One blunder committed by a wholesale house would have been followed by serious consequences, had there not been prompt and effective check. In this instance, cockroach powder containing a fluoride was sold by mistake instead of baking powder.

Beverages.—Four hundred and fourteen samples were analyzed in the laboratories and in addition to this control many labels were inspected from the standpoint of the Food and Drugs Act. This trade represents many problems from the regulatory standpoint, partly because small operators are entering the field from time to time and many labelling defects arise on a plea of lack of information. In general there is no great difficulty in securing reasonable compliance with the requirements of the Act. Far more serious is the wilful use of saccharin which is prohibited and the use of preservatives without label declaration, as required by the regulations. It was found necessary to institute twenty-six prosecutions for offences arising from these two sources. It is to be hoped that these will have the effect of improving the beverage trade.

Butter.—One thousand and seventy-seven samples of butter were analyzed during the year. This work was done largely in co-operation with the Department of Agriculture in the enforcement of the Dairy Industries Act. Strict control was kept of the butter importations, particularly at the port of Vancouver. Inspection was made of 25 shipments from Australia, 291 from New Zealand, 1 from the Fiji Islands and 9 small shipments from the United States. It was found that there was general compliance with the regulations respecting preservatives, particularly that limiting boric acid. Two of the shipments from the United States were refused entry because of excess moisture content.

Cocoa.—Of fifty-six samples of cocoa powder all proved to be of fair quality. In some instances, particularly in the cheaper powders sold from bulk, the fat content was comparatively low but in the absence of excess shell or fibre they met the standards generally accepted on this continent.

Eggs (Processed by drying or refrigeration).—Fourteen import shipments from China were examined at the laboratories in Vancouver and Halifax and found to be of satisfactory quality.

Figs.—This fruit always presents a special problem because the fig is particularly subject to infestation with insects and moulds. One hundred samples were examined in the laboratories. From the results obtained, five comparatively heavy shipments were refused entry. Two of these, however, were burial shipments made by a New York importer, who, finding a huge consignment from the East refused entry to the United States at the port of New York because of defective quality, endeavoured to re-ship them to the Canadian market. As this attempt was not successful further shipments were not made. In comparing the condition of this fruit as sold now with what it was a few years ago, a decided improvement is noted in the general quality of figs coming from Smyrna and other countries in the East. The industry there is evidently making a successful effort to meet the higher standards demanded by inspection on this continent.

Fruits, Dried and Evaporated (Apricots, Peaches, Raisins).—One thousand one hundred and sixty-four samples of dried fruits of all kinds, were taken from import shipments. In the collection of samples there is full co-operation with the Department of National Revenue. Entry was refused to many shipments because of excess sulphites. These exclusions from the Canadian market cover ten shipments of apricots and two shipments of peaches. This condition contrasts very favourably with that noted a few years ago, before this control was instituted.

Ice Cream.—One hundred and ninety-eight samples of this important food gave, upon analysis, results indicating in general, a fair observance of the regulations fixing the standards of quality. It was found necessary, however,

to call the attention of certain manufacturers to the fact that they were trying to standardize their products too closely to the minimum of 10 per cent milk fat.

Maple Products.—There is a considerable improvement in the quality of the products sold this year. The brown sugar cakes and certain syrups, formerly sold during the maple season, did not appear in the trade, apparently as a result of the special effort made last year to enforce the sections of the Maple Act, which prohibit the sale of any such sugar or syrup resembling maple sugar or maple syrup. Twelve prosecutions for adulteration were brought to a successful issue. Considerable laboratory work was also done for the investigations and relief of the problems of this industry.

Meats and Meat Products.—Six hundred samples of these products were examined in the course of the year. The results of analysis gave rise to ninety-nine prosecutions because of adulteration in sausages and hamburg steak. Persistent efforts have been made to maintain quality in these products and to combat the wishes of those who would use dyes in a deceptive manner and employ chemical preservatives as a substitute for proper refrigeration and careful handling. An observance of the regulations would undoubtedly improve the market in these products by establishing confidence in the mind of the purchasing consumer. It is quite impossible to handle meat carelessly and to disguise or arrest incipient putrefaction, to prevent spoilage by the use of sulphites and give the purchaser a product of good quality. In some districts the trade has failed to appreciate these facts, although in other localities the market in such meat products is on a much more satisfactory basis.

Nuts (Almonds, Filberts, Peanuts, Pecans, Walnuts, etc.).—In the course of the year 485 samples of nuts of all kinds were examined in the laboratories. Most of these samples came from import shipments held in customs pending the result of analysis. This has been found to be a far more satisfactory policy than any procedure based on attempts to inspect after the goods are distributed to the trade. Several very heavy shipments were refused entry and a few were reconditioned before sale was allowed. A decided improvement of the quality noted in previous years was observed in all lines. One stock consisting of ten cases of shelled walnuts was disposed of by confiscation and destruction as it was quite unfit for food.

Spices.—The results obtained in the analysis of 911 samples of spices of all kinds indicate some improvement in the general quality of these products as sold, but in view of the fact that such analytical work has been conducted annually since 1876, it is evidently a difficult matter to legislate this trade into honesty. It has been found necessary to make several very heavy seizures of adulterated pepper containing over 30 per cent of rice flour. These, consisting of several tons, will be disposed of by forfeiture and donations to charitable institutions. In addition to this important case, thirteen prosecutions were instituted for the adulteration of spices. As a result of the inspection at ports of entry the quality of imported spices, particularly that of nutmegs, shows decided improvement over that of previous years. The trade cannot, therefore, complain of unsuitable raw materials.

Other Important Foods examined may also be mentioned briefly, the numbers following each item indicating the number of samples analysed during the year: Cheese, 41; macaroni and spaghetti, 94; flavouring extracts, 85; fish, 46; food colours, 192; coffee, 33; prepared milk, 74; jams, 49, etc.

DRUGS

Acetylsalicylic Acid.—This drug is very widely sold under a variety of trade names, the majority of which give no clue as to their chemical composition. One stock of five-grain tablets was found defective with respect to weight. These so-called five-grain tablets weighed only 4.77 grains, the acetylsalicylic acid content being 4.5 grains. These failures indicate careless manufacture. Fortunately this condition has not become general. There was a great improvement in the general run of market samples of this drug as compared with those collected last year and two years ago.

Belladonna Preparations. Belladonna preparations were dealt with in two articles published in the Journal of the Canadian Medical Association (August, 1927, Vol. XVII, page 923; also October, 1927, Vol. XVII, page 1187). There seems to be considerable confusion in the matter of labelling these preparations and the quality of many samples was decidedly inferior. Subsequent samples show some improvement in the market but it will likely require considerable time for the trade to appreciate the importance of maintaining quality in these products.

Camphor, Spirits of. In the following up the work done in 1926, further samples of spirits of camphor were procured and analysed. One stock, found to contain only 7.25 grams of camphor per 100 cc. was held in detention until brought up to the requirements of the B.P. (10 per cent). The product of one manufacturer was found to contain brucine, as it had been made from a denatured alcohol, the sale of which (as rubbing alcohol) is authorized by the Department of National Revenue.

Camphorated Oil.—Occasionally samples of this preparation come to the laboratory for analysis, as it enjoys extensive sale and use, although not regarded as an important potent drug. Apparently the majority of manufacturers have adopted the formula of the United States Pharmacopoeia, in which cottonseed oil is used instead of the olive oil specified in the British Pharmacopoeia. There is no evidence that cottonseed oil is unsatisfactory as a vehicle for the camphor and if properly labelled as a United States pharmacopoeial product, its sale in this form does not conflict with the requirements of the Food and Drugs Act.

Ether, Anaesthetic.—Ether for anaesthesia continues to present a problem. Several samples have been found not to meet the requirements of either the U.S.P. or the B.P. Defective stocks have been drawn from the market on several occasions. There seems to be less difficulty in manufacturing satisfactory ether than there is in maintaining quality in containers while passing through the channels of trade and the storage period preceding use in the operating rooms. The deterioration of ether has been the subject of many technical investigations and it is hoped that a study, now in progress in the laboratory, will assist in improving matters.

Hydrastis (Golden Seal). Fifty-one samples of commercial preparations of Hydrastis were examined and made the subject of a special report (Canadian Medical Association Journal, 1927, Vol. XVII, p. 1317). Only 23 per cent of the liquid extracts and about 15 per cent of the tinctures met the pharmacopoeial requirements. There is great confusion in labelling and evident lack of standardization by the manufacturers. Publication of details has been made, largely as a formal warning. Effects will be judged by results of subsequent collections.

Hydrogen Peroxide.—A number of samples collected in the district of Ottawa were found to be substandard, the available oxygen in one instance as low as six per cent instead of the ten per cent required by the pharmacopoeia. These were traced back to manufacturing jobbers who had been making decidedly amateur attempts at preparing this drug for the market. As the manufacturing processes for making and stabilizing peroxide solutions of satisfactory quality are now well past the experimental stage, there is no excuse for gross failure in marketing a product which will be satisfactory to the purchasing consumer. A seizure of existing stocks was necessary to secure adjustment. Subsequent examinations have shown a decided improvement in the quality of the peroxide purchased in retail stores.

Iodine, Tincture of.—There was a recurrence of complications arising from apparent misunderstanding of the iodine content of a certain grade of denatured alcohol furnished by the Department of National Revenue. The manufacturer responsible for the error was compelled to withdraw substandard stocks from the market. It is to be hoped that the revision of the British Pharmacopoeia, now pending, will provide different standards, sufficient for all the needs of the trade, and relieve the situation complicated by the use of the same name for solutions of widely variant strength.

Medicated Wines.—It is held that a label declaration must be made of the medication claimed to be present and that such medication shall be in a manner detectable by the usual methods of analysis. Large stocks in Toronto were held until there was compliance with these conditions. This has no bearing upon the possible misuse of these wines for beverage purposes, as it was clearly not the intent of the Food and Drugs Act to limit or restrict the sale of alcoholic beverages. The regulations require, however, that label declarations shall be reasonably accurate.

Nux Vomica Preparations.—The results obtained in the analysis of forty-one samples of Fluid Extract of Nux Vomica and of sixty-five of Tincture of Nux Vomica, procured on the open market in the drug stores of the several provinces of Canada, revealed a very undesirable condition of affairs. Fifty-five per cent of the tinctures and sixty-three per cent of the fluid extracts failed to meet the requirements fixed by the British Pharmacopoeia. Details were fully presented in an article published in the Journal of the Canadian Medical Association (July, 1927, Vol. XVII, page 803). A subsequent collection showed some improvement although it is evident that carelessness in preparation and marketing has not been entirely eliminated. One pharmaceutical manufacturer protested vigorously against being penalized, after much extensive warning, because he was found to be using a method of assay fundamentally in error. Undoubtedly it is the duty of both manufacturers and dispensers to pay great attention to the quality of this drug as sold.

Sulphur Ointment.—It was found upon inspection that one manufacturer was dispensing this preparation made with a petroleum base. As the pharmacopoeias and standard works do not recognize such an ointment as official, the product must be regarded as adulterated.

DRUGS, NARCOTIC

Four hundred and sixteen samples were analyzed for the purposes of the Opium and Narcotic Drug Act. In a great majority of cases certificates were used for court cases. In this very exacting work, requiring extra care and skill, very satisfactory services were given by the analysts in the Ottawa laboratory and by the analysts in charge of the branch laboratories. There still remains for adjustment, the sections of the Act which have been construed as requiring the appearance of the analyst in court.

PATENT MEDICINES

During the year sixteen samples of patent medicines were examined in the laboratory, chiefly for the purpose of comparing the composition of preparations actually on the market with that indicated by the formula submitted with the application, prior to the assignment of registration number. In one instance the alcoholic content was in excess of the amount claimed and the accompanying medication decidedly low. In another case the strychnine content was at variance with the facts, apparently because of the manufacturer confusing strychnine with nux vomica. There was a full measure of co-operation with the Proprietary or Patent Medicine Division in dealing with the claims made for registered preparations upon the label or otherwise.

OTHER DRUGS

From the standpoint of the administration of the Act, the most difficult problem presented in connection with drugs arises from the flagrant advertising employed in the marketing of preparations sold under distinctive names, which are not to be found in any pharmacopoeia or generally recognized standard work on materia medica or drugs. The amendment to the Act, made during the 1927 session of Parliament, prohibits the making of false or exaggerated claims for any drug. It has taken considerable time for all parties interested to become informed of this amendment but plans are being made for an extensive campaign to protect the purchasing public from being misled by improper advertisements. It is hoped that prosecution of a few of the worst offenders will serve as an example and that the ultimate result will be an improvement in these matters.

NARCOTIC DIVISION

The Narcotic Division of the department had a very busy year, as a result of which it may safely be stated that the narcotic situation in Canada continued to improve.

In so far as the legal traffic was concerned, some three hundred more ounces of cocaine were imported than in 1927, while there was a marked reduction of nearly two thousand ounces in the morphine entering Canada, with a small reduction of fifty pounds of crude opium as compared with the previous year.

In November, 1927, a meeting was held in Ottawa between officials of the department and representative wholesalers, licensed to handle narcotics, at which a number of important points were discussed, both from the standpoint of the administrative control of narcotics, and also the commercial aspect thereof, as a result of which certain standard rules were agreed to, and all license holders circularized accordingly, the principal points being:—

- (1) That narcotic orders, in transactions between wholesalers, should be signed by a responsible person, who would designate under his signature his status in the firm issuing the order.
- (2) That narcotics despatched by wholesalers direct to physicians, at the request of, and which were charged to retail druggists, should be reported monthly as sent to the druggist or physician concerned, thus rendering it possible to keep an accurate record in the department of the total quantities of narcotics received by physicians from all sources.
- (3) That telephone or telegraph orders for narcotics should not be accepted by wholesalers, and that proper written orders therefor must be actually on their premises, and passed upon by a responsible officer of the firm before the despatch of the narcotics.

- (4) That preparations containing less than one-quarter grain of morphine per fluid ounce, or two grains of opium per ounce, could be supplied to retailers in small packages not containing over sixteen ounces, without a narcotic order, if properly labelled, as provided under section (8), as being unlawful to administer to children under two years of age.

At the request of the wholesalers, all hospitals were circularized, pointing out that under the Act narcotics could only be obtained for a hospital on a physician's order, which had to be on the premises of the wholesaler before the narcotics were shipped. It was also pointed out that in some cases it was known that hospitals had no superintending or resident physician, and that there might conceivably be a reluctance on the part of any one of several attending physicians to take the responsibility for signing such orders, in which case there would be no objection to their being countersigned by either the lady superintendent, the buyer, or the dispenser, for the protection of the physician, but that the latter's signature was an absolute essential under the Act.

In so far as the retail druggists were concerned, the inspection of a large number of drug stores was undertaken, and this work will be continued from year to year. In a very considerable proportion of cases various conditions, more or less serious, which were in contravention of the Act, were discovered, such as the acceptance of narcotic prescriptions not properly signed or dated, neglect to enter narcotic transactions in the narcotic register, the holding of blank prescriptions signed in advance by physicians, etc. In every instance, in addition to a verbal warning issued at the time of inspection, a letter was despatched from the department to the drug store concerned, explaining the law on the subject, with follow-ups where necessary, until an assurance was received that the Act would be more carefully followed in future. In this way it was possible to very materially improve conditions affecting the retail sale of narcotics without recourse to the courts. While any retail druggist is limited to the purchase of a maximum of one ounce of any one narcotic in any one month, there were found to be a few whose legitimate requirements, by reason of their being located in a large centre, or of having handled for many years the orders of their local hospital, exceeded the maximum. In every such case, where conditions warranted it, permission was given for the purchase of a larger supply.

In so far as physicians are concerned, a large amount of work was undertaken in an endeavour to compile, and keep up to date, a complete list of those "registered as medical practitioners, and in good standing under the Act governing the practice of medicine and surgery" within the various provinces. The same procedure was followed with regard to dentists and veterinary surgeons, and the thanks of my department are due to the registrars of the various associations in the nine provinces for their co-operation, and for the very considerable trouble which they took in that regard. When such lists were finally compiled, it was found that certain persons had been in the habit of obtaining narcotics, who were not legally entitled to do so. Such cases were immediately adjusted, and continue to be as they arise, so that it can now safely be said that the system of control of narcotics in the legal traffic is as efficient as it is possible to make it.

Many physicians were communicated with, whose purchases or prescriptions for office use were above the average, and while the department has neither the right nor desire to interfere between a physician and his patients in cases where a medical condition exists which requires the use of narcotics, I regret to state that a certain proportion of cases was discovered where the narcotics obtained were not being administered in accordance with the Act. In some instances patients were being given large quantities daily, under circumstances

where no condition other than addiction existed. Some of these cases were of long standing, dating back to the period before there was an Opium and Narcotic Drug Act, which made such conditions illegal. No one appreciates more earnestly than I do the unfortunate situation in which the practising physician is placed in cases such as these, but if some consideration is given to the subject, it will be realized how impossible it is to permit their patients to continue indefinitely to receive large quantities of the drugs to which they are addicted. The unfortunate physician, with one or more of such cases on his hands, quite naturally says:—

“It is against the law for me to continue to treat these cases as I have done in the past, yet what am I to do with them? There are no institutions in my province where proper treatment is available, or if there is such a place, it is a private institution where the fees, in so far as my cases are concerned, are prohibitive.”

At present the only answer available to the department is that the responsibility for the care and treatment of addicts, by the provision of institutions therefor, or the making available of accommodation in existing institutions, with power to commit addicts thereto for treatment, is just as much a provincial obligation as is the care and treatment of the tuberculous or the insane, and although this phase of the narcotic problem has been strongly stressed for many years past, Alberta is the only province in Canada where both power to commit and provision for treatment exist, although Nova Scotia has passed legislation in that regard without, however, making it effective by providing the necessary accommodation. If, in such circumstances, the department allows matters to continue as formerly, the intention of Parliament, as expressed in the Opium and Narcotic Drug Act, is not being carried out, and we are failing in our obvious duty, not only because the law on the subject is perfectly clear, but because, from our own experience, we realize how essential it is to prevent matters remaining as they are, and have these unfortunate people continue as addicts for the balance of their lives. Similarly, if they are allowed to carry on as before, and receive what narcotics they want from their attending physicians, everything remains quiescent, and no government, provincial or otherwise, could be expected to undertake the expenditure involved in the provision of institutional treatment if, by reason of everything remaining quiescent, no particular purpose would apparently be served, and with no public opinion apparently demanding a change. I have also in mind the fact that by endeavouring to enforce the provisions of the law as it now stands, we undoubtedly are of considerable assistance in co-operating with the physician concerned in effecting cures in a certain number of cases, particularly where the patient concerned is possessed both of a certain standing in the community, and of a real desire to be cured. Letters received from physicians at the successful conclusion of such cases more than make up for the lack of success or co-operation which are also experienced in other instances, and I cannot for one moment agree that we should merely abandon all effort to cope with the evil effects of drug addiction so long as we are achieving even a small measure of success, which would, however, be undoubtedly increased to a marked degree if the remaining provincial governments filled the crying need which exists for the provision of institutional facilities within their borders, to which narcotic addicts could be sent by the physicians practising in their provinces, and thus in many cases render it possible to return to a normal life, members of their own communities, who are in many instances entirely susceptible of being again made decent citizens, and also not only free the members of the medical profession from a condition which many of them feel to be more intolerable as each year goes on, but perform a social service which would be of incalculable benefit.

Cases of addiction, other than those of the underworld, naturally become known to us only in the strictest confidence, and I venture to state that if the medical profession had at its disposal the machinery for handling the narcotic addict in a manner somewhat similar to that of the insane, in so far as administration is concerned, the results in some provinces at least would prove surprising, and more than worth while. Drug addiction as an underworld accompaniment may be with us permanently, and underworld associations will always result in a large percentage of reversions after cure, but there are many persons in the higher planes of life who would almost certainly never revert if given the chance of cure under conditions involving the control both of the patient and his narcotics during treatment, which are recognized as being absolutely essential if concrete results are to be obtained. Furthermore, every drug addict removed from the streets, and sent to an institution for treatment, not only lessens the demand to that extent, and thereby renders more effective the efforts which are made to control the illicit traffic, but reduces the criminal activities of the underworld type, who, in so many instances, embark on a life of crime to furnish the means whereby they may cater to their craving. It is also well known that "addicts breed addicts", and any steps taken which tend towards the control and cure of those already addicted, cannot fail to have their effect in preventing the spread of this most insidious habit.

During the year it was unfortunately necessary to institute proceedings against seven physicians, two veterinary surgeons, and three druggists. As cases against medical men naturally result in considerable comment from those not familiar with the circumstances, it might be well to point out that no prosecution is entered until a most careful investigation has been made, which investigation is not initiated as part of a general campaign, but because definite suspicion exists in a particular case. In every instance the evidence available is carefully weighed in the department, and authority to prosecute is not issued unless the circumstances in the case are such that it is considered to be in the public interest, and in the proper administration of the Opium and Narcotic Drug Act to do so.

In order, therefore, that there may be no misunderstanding of the circumstances, which the department encounters in dealing with this class of case, I deem it advisable to quote such details in regard to some of them, without giving the names or places, as will, I trust, make the situation clear.

(1) Doctor "A", resident in a large city, being strongly suspected of commercializing in narcotics by supplying numerous peddlers and addicts, was interviewed by an agent, who arranged to purchase, and paid in advance for, \$7 worth of cocaine. This narcotic, being purely a local anaesthetic, could not conceivably be sold by an honest physician under such circumstances. Later, on the same day, the doctor delivered the cocaine, and expressed a desire to sell drugs by the ounce, as a result of which another appointment was made, on which occasion a deposit of \$14 was paid, and arrangements made for the delivery of an ounce of cocaine and the payment to him of the balance of the purchase price. At this interview Doctor "A" tried to sell an ounce of morphine as well, stating that he was short of money and needed \$50 by the end of the week. In due course the cocaine was delivered, and on examination was found to consist of one-half ounce only. Subsequent investigation proved that the doctor had, on the same day, purchased one-half ounce of cocaine from a wholesaler, and as no narcotics were found in his office, it is reasonable to assume that he deliberately supplied only one-half of the quantity agreed upon and paid for. He was arrested, and eventually sentenced to eighteen months' imprisonment, the judge making the following remarks when sentencing him:—

"Doctors who make a living selling drugs will get severe sentences if caught. They are supposed to look after these unfortunate people, and not help them in their habits. It is a more serious offence for a doctor, owing to his position, to be selling drugs illegally, and severe punishment will be given to them."

(2) In the same city Doctor "B", also under strong suspicion, agreed to sell one ounce of cocaine to an agent for \$35, and stipulated that he make the delivery at a house some doors away from his own office. In due course delivery was so made, and on his being arrested, the purchase price, in marked money, was found in Doctor "B's" pocket. He admitted the facts, and claimed that he had mixed three-quarters of an ounce of some other drug with the cocaine, and estimated that he had actually sold only one-quarter of an ounce of the narcotic. He would, therefore, have received \$35 for something which cost him \$3. He made the additional statement that he had not been practising long, found it difficult to get a start, so sold narcotics to make a little money. He pleaded guilty, and was fined \$200 or three months' imprisonment.

(3) In another city Doctor "C", being under suspicion on account of a large number of narcotic prescriptions known to have been issued by him to straight addicts, was visited, and sold twelve and one-half grains of morphine for \$12, at the same time promising to obtain cocaine and a larger supply of morphine for a future transaction. On a later date he sold twenty grains of heroin for \$20, and after four transactions in all, was arrested in due course, found guilty, and sentenced to from six to twelve months' imprisonment.

(4) In another locality Doctor "D" was suspected of supplying narcotics to a young addict under conditions which amply warranted investigation. As a result an agent purchased from the physician eight grains of cocaine, and forty-six morphine tablets, arranging also for further purchases. Five days later ten grains of cocaine, and twenty-five morphine tablets were purchased. A week later seven grains of cocaine were sold for \$5. Shortly afterwards Doctor "D", in return for \$11, sold ninety-two morphine tablets, a bottle of cocaine solution and four needles. A week later he sold twenty-eight morphine tablets, four grains of cocaine, and two prescriptions for twenty-five morphine tablets, and ten grains of cocaine respectively for \$22. He was arrested on that occasion, convicted on the first charge, and committed to trial on the remaining five. He appealed against the conviction, but the Appeal Court of the province dismissed his appeal, and sentenced him to three months' imprisonment. The Chief Justice in delivering judgment stated:—

"The court is of the opinion that the defendant was properly tried, and on credited evidence, properly convicted."

He subsequently pleaded guilty to the remaining five charges, and received similar sentences on each, to run concurrently.

In so far as the two cases against veterinary surgeons were concerned, these were both in the same city, and as the department had strong reason to suspect that narcotics were purchased illegally from them, an agent found that he had no difficulty in purchasing cocaine by the ounce. The court imposed a sentence of three months' imprisonment in each instance.

In the prosecutions of retail druggists one case was developed as a result of an investigation being made into another matter, it being ascertained that although the accused had been a druggist for twenty-five years, he kept no narcotic register whatever, although narcotic prescriptions, the subject of the other investigation, which were known to be forged, were being filled. The department had ample reason to take action in this case, and a fine of \$200 was imposed.

In the other case, which was one of selling paregoric illegally, which preparation contains one-quarter of a grain of morphine per fluid ounce, the conditions were such as to reveal a very distressing set of circumstances, upon which it is not advisable to dilate, and my department felt that court proceedings were necessary. A fine of \$50 and costs was imposed.

THE ILLICIT TRAFFIC

While there has been a decrease in the number of convictions obtained for breaches of the Opium and Narcotic Drug Act during the period under review, the year has been one of exceptional activity on the part of the officers administering this Act, and the policy of aiming at, and continuing to aim at real traffickers has been amply justified, and produced highly satisfactory results. To the furtherance of this end, the Department of Justice, at my request, communicated with the Attorneys-General of the various provinces, pointing out that if, in the ordinary course of the administration of justice, the police forces, both provincial and municipal, within their jurisdiction, would undertake the responsibility of developing and prosecuting the smaller narcotic cases; such as the small street deck peddler, the keepers of opium joints, and the frequenters thereof within their cities and towns, this would relieve the federal officers of a vast amount of petty detail, to say nothing of the saving of time which they were otherwise required to devote to attending court on numerous occasions owing to the frequent remands in connection therewith, which time could be much better devoted to the larger cases, and those of an interprovincial or international character. This change was effected during the summer of 1927, and by means of personal visits to many of the police forces concerned, a basis of mutual co-operation was arranged, which has already proved to be of the greatest assistance. It was realized that some cases required the expenditure of considerable money, which the previously calculated budgets of the local police forces were not prepared to assume, and it was, therefore, arranged that if certain municipal police forces, in the course of keeping their streets or territory clear of the small peddler, encountered an unexpectedly big case, or one in which the various processes of appeal or Habeas Corpus were invoked, the department, as a temporary measure, would furnish, on request, and free of cost, trained legal assistance to represent the Crown in such instances. Similarly, a great improvement was effected by the employment, so far as was possible, of lawyers who would specialize on narcotic work. It can be easily realized that in many of the larger cases, which we handle, money is no object on the part of the prisoner when the evasion of a penitentiary sentence is his aim, and every possible process of law is resorted to with that objective in view. Various new points are constantly being brought before and decided by the courts, and as such cases are concluded, the facts and decisions are at once communicated by the department to the lawyers handling narcotic cases throughout Canada, so that they are at all times au fait with what is going on in the Dominion as a whole; previous errors can be guarded against, and effect given to judgments rendered in various provinces, which are of importance in the rest of the Dominion. The wisdom of this procedure has been particularly exemplified during the past year, when, on the Crown proceeding to appeal in British Columbia against a four-year sentence, on the ground of inadequacy, a seven-year term was imposed by the Appeal Court, under conditions which were almost immediately duplicated in Winnipeg, when prompt action on our part resulted in similar action being taken in that city with equally satisfactory results, although the Vancouver case had not as yet appeared in the Official Law Reports. As an instance of the numerous legal points which are raised by a narcotic trafficker, it will be found that no less than seven narcotic cases are reported in the last volume published (49) of Canadian Criminal Cases, and they are well worth the study of those interested in this problem.

Of the 490 convictions obtained during the year, 351 involved Chinese, but it will be noted from the details of a number of cases included in this survey that the connection of members of that race with the narcotic situation in Canada is by no means limited to operating or frequenting opium joints, but

extends to trafficking not only in opium, but in the three drugs, morphine, heroin and cocaine, which are more commonly the drugs of addiction for Occidentals. It will also be noted that of the 490 convictions, 200 were for possessing or selling narcotics, 166 were for offences in connection with opium smoking, while for 124 we have no definite details. During the year arrangements were made with a press clipping agency for news-clippings covering all narcotic cases appearing in the press, and as a result I hope in future years to be in possession of details in connection with the great majority at least of the cases handled by municipal police forces, or at least those of sufficient interest to warrant a newspaper item. Great assistance in connection with the smaller cases has been furnished by the British Columbia Provincial Police, who have handled many on their own initiative, and assisted us in others, while the work of the city police forces in Montreal, Toronto, Winnipeg, Saskatoon and Vancouver has also greatly aided in ridding our streets of the smaller trafficker, with occasional cases of larger calibre occurring in which the mutual co-operation has been all that could be desired.

The work of the Royal Canadian Mounted Police has been of the highest calibre. Their co-operation has been whole hearted and painstaking, and I have on many occasions had my attention drawn to the extraordinarily careful and clever methods by which most intricate cases have been developed.

I also desire to pay tribute to the most valuable assistance which has been accorded to us by the narcotic authorities of the United States. Co-operation between the two countries in this regard is of almost daily occurrence, and two of our most important cases have been brought to a successful conclusion largely through their loaning us the services of one of their best operatives, which enabled us to inject into the proceedings that element of trained knowledge, combined with a complete freedom of any possibility of recognition, which is so essential in dealing with the "higher-ups". This was particularly exemplified in a case which had its origin in the United States, the trail leading thence to Windsor, then Montreal, and finally to the Pacific coast, where we were able to convict a man known for many years as the leader of the narcotic operators there, who had been previously arrested twice, but had always succeeded in avoiding conviction, although a number of his associates had been imprisoned. This gang were known to be using two very fast motor boats in smuggling very large quantities of narcotics into Canada from the Orient. The details of this case are extremely interesting, and as they afford a good idea of the difficulties which are encountered in developing cases of this nature, they are quoted at some length.

During the summer of 1927, as a result of certain arrests in Detroit, information became available that the source of supply of the opium involved was located in Montreal. With a combination of the services of a special investigator of the United States Narcotic Service, and officers of the Royal Canadian Mounted Police, specially brought in from an outside point, a careful investigation was made in Montreal, as a result of which opium in large quantities was purchased from a certain source in that city. Matters progressed in such a manner, however, that it was definitely known that the large Montreal supply emanated from Vancouver, and that there was a reasonable chance of getting at the main operators in the latter city. The Montreal cases were, therefore, deliberately left open, and our activities transferred to the Pacific coast. It would not be in the public interest to disclose the methods then adopted, but it is possible to state that as a result of a very careful reconnaissance of underworld conditions in Vancouver Chinatown, and the use of certain letters of introduction to intermediaries therein, our special operative was eventually introduced to the "big boss", Lim Gum, who was president of a large Oriental importing house, and had many other financial interests. This operative, posing

as a large trafficker in New York, was closely questioned by Lim Gim, with regard to his acquaintances in those circles in the East. Lim Gim displayed a thorough knowledge of the various operators on the Atlantic seaboard, both in the United States and Canada. Our operative told him that he wanted to buy two hundred tins, over \$10,000 worth, of genuine Lem Kee opium, to take to New York, where there was a good market. At a subsequent meeting Lim Gim stated that he could not furnish that quantity of Lem Kee, adding:—

"We are having a bad time in getting it off the boats now. Sometimes we get it out of the water, and sometimes not. The law is pretty tough now. I could have had 700 cans, which are now in the water off Seattle, but the Seattle connection bid higher for the goods so I let them have it. I get more calls for Lem Kee from the States. I sell more of my No. 2 here, which is a very good grade, about eighty per cent as good as Lem Kee. I have direct wires pulling in Hong Kong, and have the first option on any stuff coming from China. That is how I know 700 tins have gone to Seattle. About fifteen years ago I was in partnership with three other men (whose names were given). At that time I had the market cornered in opium both in the States and Canada, as I used to do all the buying, and nobody got any opium except through us. We broke up two years later, each making \$20,000."

After further details which it is not advisable to disclose, he stated:—

"I sold one hundred cans of Opium three weeks ago to a fellow from Frisco. It was No. 2 and he liked it very well. About the same time a Chinaman from the East bought one hundred and fifty cans. There is no chance for you to get Lem Kee when I haven't got it. You couldn't get two hundred cans of any kind of stuff from anybody here but me as I control it all on the Pacific coast. You know when you went to see (—) last week, he was going to get the stuff from me so you see that I am the big connection."

Lim Gim then suggested that they arrange a code for use in letters and telegrams, the letters "Vancouver B." being selected to represent the figures from one to ten, the name "George" for Lem Kee opium, and "Smith" for No. 2 opium. He also arranged to do business under the name of Charles B. Young, and handed over a card bearing his address. He was then shown a prearranged telegram purporting to come from our operative's partner in New York stating, when decoded, that seventy-five cans were to be shipped within a week if possible. As Lem Kee was not available in large quantities, it was finally arranged that ten cans of No. 2 opium should be bought as a sample, smuggled into Seattle, and shipped thence by express to New York. If, on arrival, the New York partner was satisfied with its quality, he would telegraph our operative at Seattle, and a further deal would be arranged.

It will be appreciated that it was an extremely difficult matter to win the confidence of a man such as this big operator, and to get him to do business personally, but the prospect of a big order immediately, with others to follow, probably induced him to take a personal interest. At any rate, on the following day, our operative visited Lim Gim at his store at night, and paid him for ten cans to be delivered the following morning, Lim Gim's reason for an early delivery being that "The law is all in court, and it is the best time to deliver it." Delivery was made by Lim Gim himself, who showed the operative how to wrap the tins up in paper so that they would get past the Customs at Seattle. He then placed two tins in each of the operative's five pockets, and promised to see him again the following week. The cans were in due course turned over to the police, while the operative proceeded to Seattle to stay there for the period during which the shipment was supposed to be en route to New York. During these various interviews the operative was carefully shadowed into and out of the store, and all money used was carefully marked.

While in Seattle the operative wrote to Lim Gim in the agreed code, and in due course received a reply which, in part, read as follows:—

"Mr. A. B. B. Smith is now in town. He will be ready to do business at any time. Let me know soon as Mr. Smith is going away shortly."

This was the code indication that two hundred cans of No. 2 opium were now ready. A reply was sent both by telegram and letter telling Lim Gim that the deal would be put through on the following Sunday or Monday. The telegram was duly traced by the Vancouver authorities to Lim Gim's store, and a fake telegram, purporting to be from the New York partner to the operative, was prepared for production to Lim Gim to satisfy him that the New York end was satisfied with the grade of opium. The operative then returned to Vancouver, and by means of a telephone conversation with Lim Gim, which was listened to on an extension, a meeting was arranged for the same evening, on which occasion Lim Gim raised the price \$10 per can. He was shown the New York telegram, which, it was pointed out, referred to the price previously quoted. He expressed his regret, but would not agree to any reduction, and finally a purchase, at the higher price, was arranged. At an interview the same evening he discussed in great detail narcotic conditions in New York, and the seizure of 1,070 cans of opium on a Blue Funnel boat at Seattle the previous week, about which he was worried, remarking:—

"You know, when that boat was in here about two weeks ago, we couldn't get the load off. I have got some No. 1 coming in to-day, but don't know whether we can get that off either."

He was then paid \$1,100 for twenty more cans to be delivered the following morning, on which occasion the store was surrounded by officers in concealment, who were to rush in on receiving the prearranged signal of the operative tipping his hat, it being calculated that one minute and thirty seconds would elapse from the signal being given to the presence of the officers in the store, and the covering of the front and rear exits. The operative entered the store, and shortly afterwards, Lim Gim came down from the sleeping quarters upstairs. He told the operative to take the package from a barrel which he pointed out. This the operative did, and then proceeded to the front of the store and gave the signal, returning immediately thereafter to Lim Gim, and paying him a balance of \$50 due him. He then followed him to the back of the store, and informed him that he was under arrest. Lim Gim shouted, "What! My God! My God!" several times, ran into the cashier's office, put his hand in the wastepaper basket, and then ran upstairs, where he was found in a bed other than his own with the clothes pulled over him.

A most thorough search of the premises, which lasted all day, revealed amongst other things the marked \$50 bill in the cashier's cage, and the \$1,100 in marked money paid for the opium on the preceding evening, while in the wastepaper basket, to which Lim Gim made his first move, were the torn pieces of the letter and envelope addressed to him in the name of Charles B. Young by the operative while in Seattle. There were many other pieces of corroborative evidence which, however, it is unnecessary to enumerate. Lim Gim was in due course tried at the Assizes, where the defence was a complete alibi for all the numerous interviews outlined above. He was found guilty on the two charges laid, and sentenced to four years in the penitentiary, with a fine of \$1,000. Being a naturalized Canadian citizen he is not eligible for deportation. At the time of sentence, however, the judge remarked as follows:—

"You are what is termed a wholesaler as distinct from an ordinary peddler of dope or cocaine. The sentence would be heavier were it not for the fact that your friends have presented a wonderfully worded petition for leniency. It is signed by people I cannot ignore. I will allow this petition and the letters to be filed, and later you may get some additional advantage from them."

The prisoner having appealed, the Crown proceeded to cross-appeal on the ground of inadequacy of sentence. The decision of the Court of Appeal is given on pages 255-7 of Canadian Criminal Cases, Volume 49, in which it is stated as follows:—

"The sentence of the court is that the sentence be increased to the maximum permitted by law, viz., seven years, in each case, and in addition a fine of \$1,000 in each case, the sentences of imprisonment to run concurrently, and the prisoner to pay the costs of each proceeding here and below.

"While the discretion of the trial judge is not lightly to be interfered with, yet the statute has imposed on the court the duty to review that discretion. In this appeal it was stoutly contended by counsel for the Crown that the judge had proceeded on evidence which was not legal evidence or was not in accordance with past practice. He was handed a petition asking for leniency signed by a number of business men of Vancouver, which appears to have influenced him in imposing sentence.

"The petition is well described as wonderfully worded, but we think the trial judge was in error in receiving it. The proper practice in the presentation of evidence in mitigation of sentence is set forth in Archbold's Criminal Pleading, Evidence and Practice, where it is said:—

'As an aid to determining the appropriate punishment, the court will after verdict hear evidence for the Crown or the defendant, either *viva voce* or by affidavit.'

"While we have felt impelled to disapprove of this novel innovation at its inception, we are yet of the opinion that, apart from the influence of the petition on the trial judge's discretion, we ought, in the other circumstances of this case, to increase the sentence to the limit of our powers."

Lim Gim is now serving his seven years' sentence in Westminster Penitentiary.

In so far as the *Maritime Provinces* are concerned, conditions in regard to the narcotic traffic are eminently satisfactory, only three breaches of the Act having been detected, one of which, a charge of possession of opium, resulted in a six months' sentence, while in the other two cases fines were imposed.

In the *Province of Quebec*, which, by reason of the facilities existing for importations from overseas through the ports of Quebec and Montreal, and the proximity of New York with its heavy illicit importations, is one of our most important centres, there was a marked improvement, and both the United States authorities and the officials of my department are convinced that Montreal is no longer a centre of distribution for narcotics destined to the United States. The conviction of the gang in that city, who specialized in large international shipments, referred to in my annual report for last year, had a very marked effect, and rendered it possible to devote an increased amount of attention to other traffickers who operated solely within our borders. The Montreal city police were extremely active in ridding their streets of the small peddler, with the result that there has unquestionably been a very great improvement in that regard. Of the 99 convictions in the province of Quebec, 67 involved jail or penitentiary sentences, including one of 5 years, one of 4 years, four of 2 years, six of 18 months, and five of 1 year. Thirty-seven, or roughly one-third of the convictions obtained, involved Chinese. The following are typical of the cases handled:—

A. B. was known for many years to be a large retail trafficker in Montreal, usually making deliveries of narcotics by means of an automobile, but it proved on many occasions most difficult to arrange matters so that they would be actually in his possession if arrested. After a careful study of his methods, and the arrangement of a transaction through agents, the place agreed upon for delivery was carefully watched. A. B. was seen to engage in conversation with several men recognized as addicts or drug runners. He then re-entered his car with two of them, proceeded to a lane, and on emerging therefrom with one of them they were both arrested. The second man, C. D., was carrying an oblong parcel, which he threw down and started to run. This parcel, when recovered, was found to contain five ounces of morphine, heroin and cocaine. In the possession of A. B. were certain keys which were found to fit a padlocked trunk in his place of residence, which contained thirty-five ounces of narcotics, a large number of empty boxes, decking papers and scales used in the peddling of narcotics. A. B. was eventually sentence to two years and a fine of \$1,000, while C. D. jumped his bail, and is now living in the United States.

As a result of certain arrests in western Ontario, it became fairly certain that a Chinaman, E.F., in Montreal, was selling opium on a large scale. Two large buys were made from him under police conditions, but owing to the fact that information from other sources, obtained during this investigation, indicated that an opportunity existed to get at a large wholesale source of supply in Vancouver, which proved to be correct, as reported above, these cases were deliberately held over, and the officers despatched to the Pacific coast. On the successful conclusion of the work there, they returned to Montreal, where E.F., apparently secure in the knowledge that past transactions had proved both profitable and safe, was quite willing to sell a further large quantity, and invited our operative to lunch at a cafe. In the course of the meal a purchase of over \$1,100 worth of opium was arranged, and E.F. paid for the meal with one of the marked \$50 bills involved in the opium transaction. At the time set for the delivery of the opium, the premises were entered by our officers, and the opium seized, while some of the marked money was found in the Chinaman's pocket and the balance in a cash drawer in the store. He was eventually sentenced to twelve months' imprisonment and a fine of \$1,000.

In the *Province of Ontario* there were 50 convictions, 28 of which involved Chinese, including one sentence of 3 years; five of 2 years; two of 18 months; eleven of 1 year; and four of 9 months. Most of these cases were developed in Toronto, in which city conditions have now very considerably improved. The situation at Windsor was also the subject of a special investigation, but the cases developed there have not as yet been finally concluded in the courts. As samples of the type of cases encountered in Ontario, the following are quoted:—

G.H., considered to be the largest retail trafficker in Toronto, and possessed of a long criminal record, was the subject of a long and careful investigation extending over many weeks, at the conclusion of which, upon an addict being seen to leave the premises, he was arrested, and a complete search made of the house. The eventual touching of a button on the top of a bureau in a bedroom disclosed a secret drawer which contained eighty-nine decks of morphine and cocaine, and \$375 in money. G.H. was arrested, sentenced to two years' imprisonment, and died in jail. It was later found that his wife was still carrying on narcotic transactions on the same premises, and offering to exchange morphine for stolen goods. A lady's coat was purchased, and exchanged in that manner, while other cash transactions were put through. The wife was eventually arrested, and sentenced to six months' imprisonment, and a fine of \$600. After her arrest a thorough search of the house revealed a hiding place hollowed out in one of the beams in the cellar, in which a further quantity of narcotics was found.

I.J., recently discharged from the penitentiary from serving a narcotic sentence, was reported to have gone back into the narcotic traffic shortly after his release. Some months afterwards he, having moved over one thousand miles to another city, was found to be operating in his new location. After his methods had been studied, and shortly after he had visited another city for a fresh supply of narcotics, his apartment was searched, and he was found in possession of a quantity of heroin and a loaded revolver. He was eventually sentenced to two years' imprisonment. While the search was being made in this case, another man was seen in the vicinity acting suspiciously. He was brought into the apartment, searched, and found with morphine in his possession. He was well known to the police, and had previously served a narcotic sentence. He was awarded twelve months' imprisonment and a fine of \$500 and died in jail.

Early in the year it came to our knowledge that a man well known as an addict was making a practice of victimizing physicians in several parts of Canada by selling them worthless stocks, and obtaining morphine under pre-

tence of being desirous of taking a cure. Having convinced one physician in particular of his desire to be cured, the latter made arrangements for him to be placed in hospital, which, however, he consistently evaded, and rewarded the doctor for his trouble by stealing a prescription pad from his office, and proceeding to forge his name to a series of narcotic prescriptions. He was located before he had succeeded in having many of them filled at drug stores, and received a well earned sentence of from six months to two years on four charges in connection therewith, and at the same time pleaded guilty to ten charges of theft in connection with his selling of worthless stocks.

In the same city it was learned that an American race-horse owner, who visited Canada several times each year, was in the habit of selling narcotics on the occasion of such visits. An investigation was conducted, on both sides of the line, which lasted over a year, with the result that it was eventually possible for our officers to purchase narcotics from him, and to arrange for a larger supply. Certain available information as to the source of supply in the United States was obtained and transmitted to the narcotic authorities of that country, and finally, after another purchase of heroin and cocaine had been made from him, he was arrested and the marked money involved in the transaction found upon his person. A search of his rooms revealed the presence of considerable quantities of narcotics, an automatic pistol, and correspondence indicating his narcotic activities. He was released on \$10,000 bail, which he jumped. A thorough search was made for him on both sides of the line, and probably because the chase became too hot for a man so well known as he was, he gave himself up some weeks later, was sentenced to six months' imprisonment, with a fine of \$600, and deported at the end of his sentence.

It was noticed from narcotic sales reports received from wholesalers in the same city that a certain veterinary surgeon, whose name did not appear on the list of those registered to practise in the province, was regularly obtaining an ounce of morphine, and a similar quantity of heroin monthly. Inquiry elicited the fact that no such veterinary surgeon existed, and with the assistance of the wholesaler concerned, arrangements were made to shadow him on the occasion of his next purchase, when it was ascertained that he was selling these narcotics to the underworld. On the occasion of his next purchase he was arrested when leaving the wholesaler with two bottles of cocaine in his possession. He admitted that he had no right to purchase narcotics, gave his correct name and address, and was sentenced to two years' imprisonment with a fine of \$1,000.

In the *Province of Manitoba* there were 12 convictions, all confined to Winnipeg, and three of which involved Chinese. Included in these were two sentences of 3 years; one of 18 months; two of 1 year; and one of eight months.

In the case of A.B. and C.D., two well known and large traffickers, with ramifications extending throughout the entire underworld of Winnipeg, a very careful investigation was made of their activities, as a result of which it was ascertained that the car in which they made their deliveries of narcotics was preceded by another car, which made certain that the coast was clear, and then speeded away while the transactions were concluded. Finally, after several attempts had failed through sheer hard luck, advice was received of a fresh consignment of narcotics having reached them, and an unknown operative was imported in order to avoid any possible slip up. Posing as a bootlegger from the United States, this agent succeeded in arranging for a purchase of three ounces of heroin for \$270. A meeting with A.B. was arranged in a cafe, where C.D. joined the party, and the three then proceeded to an apartment where the three ounces of heroin and the purchase price changed hands, these men promising to deliver a further twelve ounces in two weeks' time. They were arrested and taken to the Police Station despite an offer of \$1,000, which they made

for their freedom. C.D. jumped his bail of \$20,000, thereupon his bondsmen were called upon to fulfill their obligations. This they failed to do, and as it developed that the justice of the peace who granted bail had been grossly imposed upon, proceedings were taken against them, they having disappeared in the meantime. They were subsequently located, apprehended on a Writ of Capias, and lodged in jail, subsequently pleading guilty to a charge of perjury. The effect of this action in regard to "straw bail" in a number of cases proved excellent, and several bondsmen asked to be relieved of their responsibility "for the appearance of their prisoners." Meanwhile, A.B. pleaded guilty, and was awarded the minimum sentence of six months' imprisonment. The department felt that this was totally inadequate in the case of a large trafficker, and entered an appeal on the ground of inadequacy of sentence, as a result of which his sentence was increased to three years by the Manitoba Court of Appeal. This very interesting judgment is quoted in Volume 49 of Canadian Criminal Cases, pp. 298-302, and in the course of delivering same the court stated:—

"In the reasons for judgment in several cases cited it is pointed out that the judge who presides at a trial, and sees and hears the witnesses is in a much better position to determine the proper sentence than a Court of Appeal. The authorities both here and in England lay down the rule that the Court should not interfere unless it can see that the trial judge has proceeded on some wrong principle. The present case stands in quite a different position. The accused pleaded guilty and this court is in as good a position as the trial judge to determine the sentence which should be imposed . . . The narcotic problem in Canada is a very acute one. The Government is evidently alarmed at the existing conditions, and determined, if possible, to stamp out this illegal traffic. In an effort to effect such a laudable object it is entitled to every assistance this court can legitimately give it. The authorities have no difficulty in apprehending the addict himself but for obvious reasons have the greatest possible difficulty in securing evidence against the man responsible for the existence of the traffic, namely, the vendor. The imposition of the minimum sentence of six months would not, in our opinion act as a deterrent to others who would be tempted by the enormous profits to engage in this traffic. Moreover, we are of the opinion that Parliament never intended the minimum penalty to be imposed on a person guilty of one of the most serious offences mentioned in section 4."

In another Winnipeg case, our offices got in touch with a well known peddler, who was known to be operating extensively. Working on a pre-arranged plan the locality most frequented by him was covered, and he was seized while engaged in his narcotic activities. He put up a strong resistance, and was seen to throw away a match box, which was found to contain eleven decks of heroin. He was found guilty at the Assizes and sentenced to eight months' imprisonment with a fine of \$200.

Another case in Winnipeg was that in which we had reason to believe that a parcel in the mails contained a large quantity of narcotics. With the hearty co-operation of the postal authorities, an officer disguised as a postman delivering mail made the delivery of this particular parcel at the address designated thereon, to the person who claimed that it was for him. He was arrested, and eventually sentenced to three years and a fine of \$200. A subsequent appeal on his behalf was dismissed. Curiously enough, during a subsequent raid on an apartment in a city over one thousand miles away, the original post office receipt for the insured parcel in this case was discovered, and the possessor thereof was also awarded a sentence of imprisonment.

In *Saskatchewan* as a whole we have very little trouble, there being only 13 convictions, 10 of which involved Chinese. One sentence of 2 years, two of 18 months, two of 1 year, and one of 10 months are included therein. Most of these cases were in Saskatoon where a pretty bad state of affairs was uncovered in the small Chinese underworld at that point. A suitable agent having been detailed to ascertain local conditions, it was found that the Chinese had practical control of all narcotic supplies in that city, which were sold to

white people and Chinese alike. Small purchases were made from time to time, while a full knowledge of existing conditions was being obtained, and a point for delivery selected which would permit of police supervision of the transaction. We received the most hearty co-operation of the Saskatoon city police in these cases, in the course of the development of which it was ascertained that it was a common practice, when an addict had "stung" a Chinese peddler for the supply of every addict in the city to be cut off for twenty-four hours until they were all sick, as a reminder to them all to play squarely. Finally four Chinamen were arrested for selling narcotics. The evidence obtained indicated that one of them had sold drugs to an agent in our employ for four months, that he had compelled her paramour to steal goods for him, and when her man was sent to jail, further supplies were refused to her until she stole a handbag for the lady friend of the Chinaman. After the agent had been supplied with a purse for this purpose, she exchanged same, together with some money, for a supply of cocaine, under conditions which were susceptible of corroboration both by mounted and city police officers. This man received a sentence of eighteen months and a fine of \$1,000.

One of the other Chinamen, who was proved to have sold to the same agent, received a similar sentence, the magistrate remarking that,—

"There is no provision in the Act for ordering him to be whipped. I think there should be provision and that the time is near when the law will be amended to that effect. This is one of the most serious crimes the courts have to contend with."

The two other Chinamen convicted of selling received sentences of one and two years respectively.

In *British Columbia*, with a Chinese population of approximately 25,000, we, of course, encountered our greatest difficulties in connection with the illegal importation and sale of opium, while owing to the position occupied by Vancouver as a leading Pacific coast port, we also encountered cases in which narcotics are brought in, and offered for sale, from other countries as well. It is also thoroughly well established that the Chinese dope peddler as a rule by no means confines his activities to opium, but also handles considerable quantities of morphine, heroin and cocaine. Consequently our efforts have been unsparing to effectively cope with their activities, with the result that the number of cases handled in that province is over one-half the total for whole Dominion. Of the 291 convictions obtained, about one-half were for the comparatively less important cases of smoking opium or frequenting opium dens, but it will be noted that there were 59 convictions for being in possession of narcotics, 32 of which involved morphine or cocaine or both, while there were 18 further cases of selling. Thirty-eight of those convicted were not of Chinese origin, and consisted of 32 British and Americans; three Italians; two Hindus; and one Negro. Some severe sentences, amply warranted by the facts, were imposed, including one of 7 years, one of 5 years, two of 4 years, eight of 3 years, six of 2 years, and four of 1 year. Of these heavier sentences, 20 were imposed on Chinese.

By far the most important case was that of Lim Gim referred to above, but the following details in connection with others will to some extent indicate our difficulties on the Pacific coast, and the efforts being made to overcome same, it being borne in mind that in many instances it is not advisable to disclose full details.

A.B., possessing peculiar facilities for liaison with the officers and men of ships of a certain nationality entering Vancouver, was strongly suspected of arranging for the importation of narcotics from overseas, and disposing of them in that city. After careful preliminary investigation, and the necessary introductions, arrangements were made for him to sell fifty ounces of cocaine for \$2,250. At the last minute, however, the deal fell through owing to a sale

having been arranged in another quarter, but another transaction was arranged to be put through on the arrival of the next boat a month later. Owing, however, to a special guard and search of this vessel in connection with an expected shipment of liquor, no attempt was made to land any narcotics, and matters were postponed for another month. In due course A.B. delivered samples of both morphine and cocaine, and offered for sale one can of opium for \$190. A large deal involving the purchase of thirty ounces each of morphine and cocaine, and six tins of opium for \$4,800 was initiated, but delivery was refused until the money was paid in advance, under conditions which rendered its eventual recovery impossible. A smaller deal was then arranged for, and in due course AB was arrested in a hotel, with narcotics and marked money in his possession. He pleaded guilty, and was sentenced to two years and a fine of \$200.

Information being received that a certain Japanese, C.D., was offering for sale cocaine obtained from overseas, steps were taken which resulted in an officer being introduced to him by another Japanese, E.F. In due course the latter stated that C.D. had forty-five ounces of cocaine, and sixteen ounces of morphine, for which, after considerable bargaining, the latter agreed to accept \$1,600. Samples were purchased, and found to be of good quality. Arrangements were made for delivery by car on one of the main streets of Vancouver. E.F. arrived first, and on being satisfied that everything was in order stated that the deal would proceed. C.D. thereupon drove up in a truck, whereupon one officer posing as a taxi driver and another as a passenger drove as arranged to the courtyard of a well known club. They refused to do business in the club, whereupon C.D. and E.F. got into the taxi with a sack containing the narcotics in their possession. They handed same over, were paid \$1,600 in marked money, and the car was then driven to the police station. A search of their places of residence disclosed a further small quantity of cocaine on the premises of C.D. They were committed for trial, in due course receiving sentences of three years with a fine of \$1,500, and six months with a \$200 fine respectively. C.D. applied for Habeas Corpus on the ground that the Opium and Narcotic Drug Act was ultra vires. This application was dismissed, the Supreme Court of British Columbia issuing a very full judgment which is reported in Canadian Criminal Cases, Volume 49, pp. 392-401, in the course of which it is stated:—

"When I view the 'mischief' sought to be remedied, and the manner in which this was to be accomplished, the state of the law as it existed prior to the Act of 1923, and the nature of the remedy thus applied, I have no hesitation in holding that the Act in question is criminal and not licensing legislation. The primary object was to create a crime and afford punishment for its infraction. The licensing provisions were necessary but did not affect the validity of the legislation. It was within the competence of the Dominion Parliament and did not invade the jurisdiction allotted to the province by the British North America Act. While such legislation constituted a new crime, it was remedial, in order, if possible, to destroy an existing evil. It was for the promotion of 'public order, safety and morals,' and was enacted by Parliament for the public good. While not in doubt as to the validity of the Act, I might add that it was entitled under section 15 of the Interpretation Act, R.S.C., 1927, c. 1, to receive such:—

"'Fair, large and liberal construction and interpretation as will best ensure the attainment of the object of the Act and of such provision or enactment, according to its true intent, meaning and spirit.'"

In another case, a Chinaman, G.H., located in Victoria, B.C., in 1925, been convicted for the possession of sixty tins of opium which conviction had been quashed on appeal on the ground that he had been convicted under the "Opium and Narcotic Drug Act" and not the "Opium and Narcotic Drug Act of 1923." He was known to be heavily interested in the smuggling of narcotics from overseas, and consequently when a careful survey of conditions on Vancouver island was made in the fall of 1927, it became evident that his activities were still widespread. An officer posing as an American drug peddler

was able to get in touch with one of his runners, and a trial shipment of opium was ordered and delivered. A further consignment was arranged for, twenty-five ounces of cocaine for \$800 being offered in addition to the opium. Further details were being obtained as a result of these transactions, as to the manner in which the gang of which G.H. was the head were doing business, and a final buy of \$800 worth of opium was then arranged. Upon the officer visiting G.H.'s store to pay him the amount involved in the transaction, he was told to come back later, and pay the money to another Chinaman, who would hand over the opium. At the second interview, however, G.H. accompanied the officer to a street address where he introduced another Chinaman, instructed him to receive the money, and arrange for the delivery of the goods. The officer was then handed over to a third Chinaman, who actually made the delivery, whereupon, on a pre-arranged signal, other officers closed in and all three were arrested. On a search of the premises a large quantity of opium smoking paraphernalia, revolvers and ammunition were found. At the trial a comprehensive alibi was sworn to by numerous witnesses for the defence, the prisoner's movements at a point eighteen miles from Victoria on a certain date, when the prosecution swore he was trafficking in that city, being described in great detail. As defence witnesses, however, swore that there was no snow on the ground on the date in question, and that the roads were in perfect condition, we were able to prove by Government weather recorders that there were eight inches of snow on the ground, which effectively disposed of the alibi in so far as that particular date was concerned. G.H. was sentenced to three years and a fine of \$350. He appealed, but his appeal was dismissed. He, however, jumped his bail of \$10,000 and has not as yet been located. The two other Chinamen were sentenced to four years with a fine of \$1,000 and two years with a fine of \$200 respectively.

Another case involving a Chinaman and a Hindu in Vancouver was very cleverly handled by the officers of the Royal Canadian Mounted Police. The Chinaman was ascertained to be running a vegetable store as a blind to his narcotic activities, which were conducted in a very cautious manner. A search of his premises having produced no results, it was found that he subsequently completely changed his method of delivery, and had recently received a pound of morphine, for which he had paid \$600, and a pound and a half of cocaine from overseas. Several agents failed to gain his confidence, and establish a connection with him, but finally a deal for one-half an ounce of morphine was arranged, the Chinaman offering to supply any quantity of morphine, heroin or cocaine. Delivery was to be in a park, and officers being concealed in surrounding bushes, the Chinaman duly appeared, carefully surveyed his surroundings and went away. He returned in fifteen minutes, took the agent into some brush just outside the park, and pointed to a package lying on the ground saying, "There it is." This package was subsequently found to contain morphine. A later deal, involving cocaine, was made, and on this occasion the Chinaman again met the agent in the park, and took him down the street where he introduced him to a Hindu, who stepped off the road, picked up a package, and handed it to the agent. This was found to contain cocaine. It was then decided to continue to make purchases until conditions were such as would permit the obtaining of evidence which would be sufficient in court to directly connect both these Orientals with the crime of drug trafficking. The Chinaman arranged with the officer for the use of a code over the telephone so that an order for four tons of potatoes would mean four drams of morphine, and a similar quantity of carrots would represent cocaine, while one ton would in each case represent one dram. Several other deals were put through, the officers spending long hours, both late at night and early in the morning, concealed in surrounding bushes. One deal was arranged by telephone, which was

listened in on an extension, and officers dressed in workmen's clothes proceeded to various points from which it was thought probable that the movements of these two traffickers could be watched. The agent then met the Chinaman, who walked him round three blocks, and finally took him behind the "Leap the Dips" at Hastings Park, where he was paid a sum of marked money. The Chinaman then called the Hindu, who came up, and handed over a package of morphine. When their arrest was decided upon, a final deal was made, on which occasion the Chinaman met the agent, proceeded to some bushes where he was paid, and he then told the agent to walk to a certain street and wait there fifteen minutes. When he met the agent there the Hindu was with him, the latter handing over one dram of morphine and promising to deliver another three drams the same night. On that night he delivered two drams, and promised the balance later. The Chinaman was not then present so it was necessary to arrange still another deal, when the Chinaman met the agent, received the money, and walked away. He was seen entering the Hindu's shack, from which, in a short time the latter emerged, met the agent at a pre-arranged spot, and handed over a package of cocaine. The transaction was observed by several officers, and upon the Chinaman being arrested, marked money was found upon his person. The Hindu's shack was then searched, when morphine, cocaine, decking papers and a set of scales were found concealed under a stove in the woodshed, the keys of which were in the Hindu's possession. The Chinaman was sentenced to five years and a fine of \$500, while the Hindu received a sentence of two years and a fine of \$200. This case is given in considerable detail, as indicating the extreme patience and care required in developing a case of drug trafficking. The magistrate warmly complimented all concerned, stating that rarely, if ever, had he seen a case where everything was so complete without any unfairness, while the Crown prosecutor for Vancouver city stated that it was the best prepared case he had had to handle in his fifteen years of experience, it being remarkable the way in which the evidence was worked out.

In a North Vancouver case a Chinaman was known to be selling morphine. He was visited on several occasions, and morphine purchased each time, the vendor stating, "Chinatown decks not so strong, mine much better." He was eventually arrested, with marked money in his possession, at the time of sale, together with another Chinaman, who was mixed up in the case. A search of the bushes in the vicinity of their house revealed a supply of morphine and opium. They were each sentenced to three years and a fine of \$500.

In another Vancouver case a Chinaman was sentenced to four years, and a fine of \$500 for selling narcotics, and while in the city jail was found in possession of a package of morphine cleverly hidden in a piece of sugar cane which had been hollowed out to receive it.

In a Victoria case, in which the Chinaman concerned had been sentenced to two years and a \$220 fine, an application for Habeas Corpus was made on the ground that a conviction for "distributing" opium to one person, as charged, was illegal, distribution to one person being impossible. The wording of the Act appeared to be plain enough, reading as it does, "gives away or distributes to any person," and the application was dismissed, the court stating:—

"Whatever force there may be in the submission as sought to be applied to that expression detached from the context, and in a strictly literal sense, is met by section 15 of the Interpretation Act, which reads, 'Every Act and every provision or enactment thereof shall be deemed remedial where its immediate purport is to direct the doing of anything which Parliament deems to be for the public good, or to prevent or punish the doing of anything which it deems contrary to the public good, and shall accordingly receive such fair, large and liberal construction and interpretation as will best ensure the attainment of the object of the Act, and of such provision or enactment according to its true intent, meaning and spirit.'"

Another Vancouver Chinaman known to be selling morphine and cocaine in lots from one ounce up, was approached by an officer posing as a drug peddler from Seattle, and after a purchase of one ounce at \$68, and a subsequent purchase of half an ounce, an offer was made to supply ten ounces the following week. A five-ounce deal was arranged, and paid for, the Chinaman being arrested at the time of delivery, and sentenced to two years with a fine of \$200. He had had three previous narcotic convictions, but had hitherto escaped deportation on a technicality.

Information obtained, as a result of the above case, resulted in the arrest and conviction of another Chinaman long known as the third largest trafficker on the Pacific coast. An agent, after proper introduction and the establishment of confidence, paid him \$40 for a supply of cocaine to be delivered later. A search warrant was obtained, and after the agent had received delivery at a hotel of which the Chinaman was proprietor, the premises were thoroughly searched. One of the rooms particularly suspected, and locked with a Yale lock, was found to contain a set of scales, opium labels, one cocaine label, and the marked money paid previously for a supply of cocaine, while hidden in the walls were found ninety-seven cans of opium, and over six ounces of morphine and cocaine. In the cash box was found over \$1,000 part of which was the marked money paid to the prisoner in the case previously mentioned, for a five ounce buy, which clearly showed the source of supply. This case was bitterly contested in the courts. The Chinaman, at the time of his arrest, was in possession of a large number of documents, one of which, on translation, proved to be an agreement under which, in 1920, he had purchased a girl in China for \$120 and brought her to Canada as his daughter. As he elected to give evidence on his own behalf, he was open to cross-examination, and we had no difficulty in establishing that he had perjured himself in connection with the importation of this girl. He was sentenced to three years, and a fine of \$200, otherwise a charge of perjury would have been proceeded with. Many of the documents seized were of the greatest value to our officers, and included an agreement with a certain party overseas, as to prices for narcotics, and the distribution of the financial risk in landing them in Canada. We also obtained a very comprehensive code with words covering the various phases of illicit operations in the smuggling into Canada of narcotics from the "starting work as soon as the boat arrives" and "the string has been put down" to the final phase, satisfactory no doubt from their point of view, "no goods left, all sold out." An appeal was taken in this case, but unanimously dismissed. Habeas Corpus proceedings were also dismissed, and when this man is deported at the end of his sentence, Canada will be thoroughly well rid of him.

I am convinced, and my opinion is confirmed by information obtained from a number of sources, that our systematic method of "going after" these big traffickers, a policy which has been energetically followed up during the period subsequent to that now under review, has at last begun to tell, and that we are gradually getting a firm hold upon the narcotic situation on the Pacific coast.

TABLE No. 1A. DETAILS OF INFRACTIONS AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1927. (FIGURES NOT AVAILABLE FOR THE FISCAL YEAR)

| Provinces | Breach of Opium and Drug Act, not further defined | In Possession of | | | | Nature of Offence | | | | | | Total |
|-----------------------|---|------------------|---------|----------|---------------------------|-------------------|------------------------------|---------------------------------|-------------------------|-----------------------------|----|-------|
| | | Opium | Cocaine | Morphine | Drugs not specified | Smoking Opium | Selling Narcotic Drugs | Dispensing Narcotic Drugs | Keeping Opium Den | Frequenting Opium Den | | |
| | | | | | | | | | | | | |
| Nova Scotia..... | 2 | 1 | | | | | | | | | | 3 |
| Quebec..... | 5 | 1 | | | 63 | | | 9 | | | 21 | 99 |
| Ontario..... | 13 | 3 | | | 18 | 4 | | 8 | | | 4 | 50 |
| Manitoba..... | 2 | 4 | 3 | 2 | | | | | | | 1 | 12 |
| Saskatchewan..... | 9 | | | | 2 | 1 | | 1 | | | | 13 |
| Alberta..... | 13 | 2 | 1 | | 4 | 1 | | | | | | 22 |
| British Columbia..... | 80 | 18 | 14 | 18 | 9 | 79 | | 8 | 10 | | 55 | 291 |
| Totals..... | 124 | 29 | 18 | 20 | 96 | 85 | | 27 | 10 | | 81 | 490 |

TABLE No. 1B.—DETAILS OF INFRACTIONS AGAINST THE OPIUM AND NARCOTIC DRUG ACT FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1927

| Province | Total Convictions | | Sentence | | | Racial Origin | | | | | | | | Total | |
|-----------------------|-------------------|--------|------------------|----------------------------------|-------------------|----------------------|---------|--------|---------|--------|---------|--------|-------|-------|-------|
| | Male | Female | Option of a fine | Committed to gaol without option | Sentence deferred | British and American | Chinese | French | Italian | Polish | Russian | Jewish | Hindu | | Negro |
| | | | | | | | | | | | | | | | |
| Nova Scotia..... | 3 | | 2 | 1 | | | 3 | | | | | | | | |
| Quebec..... | 86 | 13 | 30 | 67 | 2 | 33 | 37 | 24 | 1 | | | | 1 | | |
| Ontario..... | 43 | 7 | 41 | 9 | | 20 | 28 | | | 2 | 1 | | 2 | | |
| Manitoba..... | 7 | 5 | 4 | 8 | | 9 | 3 | | | | | | | | |
| Saskatchewan..... | 13 | | 10 | 3 | | 3 | 10 | | | | | | | | |
| Alberta..... | 22 | | 18 | 4 | | 5 | 17 | | | | | | | | |
| British Columbia..... | 285 | 6 | 222 | 67 | 2 | 32 | 253 | | 3 | | | | | 2 | 1 |
| Total..... | 459 | 31 | 327 | 159 | 4 | 102 | 351 | 24 | 4 | 2 | 1 | 3 | 2 | 1 | 1 |

TABLE NO. 2

| | |
|---|-----|
| (a)—NUMBER OF IMPORT AND EXPORT LICENSES ISSUED DURING THE FISCAL YEAR ENDED MARCH 31, 1928 | |
| Import licenses..... | 332 |
| Export licenses..... | 61 |
| (b)—NUMBER OF WHOLESALE AND RETAIL DRUGGISTS' LICENSES ISSUED FOR THE CALENDAR YEAR 1928 | |
| Wholesale druggists..... | 108 |
| Retail druggists..... | 24 |

TABLE NO. 3.—Amount of Narcotic Drugs imported into Canada, under the licensing system which became effective during the year 1919, for the fiscal years ended March 31, 1919-1928, inclusive

| | Cocaine | Morphine | Crude Opium |
|-----------|---------|----------|-------------|
| | oz. | oz. | lb. |
| 1919..... | 12,333 | 30,087 | 34,262 |
| 1920..... | 6,968 | 28,198 | 13,626 |
| 1921..... | 3,310 | 12,214 | 2,953 |
| 1922..... | 2,952 | 8,774 | 1,700 |
| 1923..... | 3,330 | 10,998 | 1,373 |
| 1924..... | 1,561 | 7,092 | 845 |
| 1925..... | 1,589 | 7,424 | 655 |
| 1926..... | 2,633 | 8,651 | 810 |
| 1927..... | 2,659 | 8,873 | 1,020 |
| 1928..... | 2,967 | 6,926 | 970 |

NOTE.—Morphine includes diacetylmorphine (heroin).

In addition to the amount of narcotics imported by licensed dealers during the twelve months ended March 31, 1928, the following amounts of such drugs seized for infractions of the Opium and Narcotic Drug Act were disposed of to licensed wholesalers as follows:—

TABLE NO. 4

| | |
|---|----------------|
| By the Department of Health..... | nil |
| By the Department of National Revenue, Customs-Excise Preventive Service— | |
| Drug | Quantity |
| Gum opium..... | 20 lbs. 5 ozs. |
| Morphine..... | 50 “ |
| Cocaine..... | 55 “ |

TABLE NO. 5—Summary of Narcotic Drugs exported from Canada during the fiscal year ended March 31, 1928

| Kind of Drug | Destination | Quantity |
|---|--------------------------|------------------|
| Cocaine..... | Newfoundland..... | 1 oz. 33½ grs. |
| Cocaine..... | British West Indies..... | 22 ozs. |
| Morphine (9,230 tablets and pills)..... | Newfoundland..... | 3 ozs. 312 grs. |
| Morphine..... | British West Indies..... | 6 ozs. 109½ grs. |
| Heroin (diacetylmorphine)..... | Newfoundland..... | 36 grs. |

PREPARATIONS CONTAINING NARCOTIC DRUGS

| | | |
|--|------------|--|
| Blackberry Compound (Newfoundland)..... | 160 ozs. | Each fluid ounce contains 15 minims of tincture of camphor compound. |
| Chlorodyne (British West Indies)..... | 16 ozs. | |
| Chlorodyne (Newfoundland)..... | 256 ozs. | |
| Concentrated Tincture of Camphor Compound (Newfoundland).... | 16 ozs. | |
| Creo-Terpin Compound (Newfoundland)..... | 80 ozs. | Each fluid ounce contains ⅓ grs. heroin. |
| Cholera Infantum Mixture (Newfoundland)..... | 80 ozs. | Each fluid ounce contains 60 minims tincture of camphor compound. |
| Elixir Heroin and Terpin Hydrate (Newfoundland)..... | 3,800 ozs. | Each fluid ounce contains ⅓ gr. heroin. |
| Elixir Terpin Hydrate and Creosote Compound (Newfoundland).... | 2,960 ozs. | Each fluid ounce contains ⅓ gr. heroin. |
| Hypno-Bromic Compound (Newfoundland)..... | 168 ozs. | Each fluid ounce contains ½ gr. morphine and 1 gr. Cannabis indica. |

PREPARATIONS CONTAINING NARCOTIC DRUGS—*Concluded*

| | | |
|---|------------|---|
| Ichthy-Tannic Suppositories (Newfoundland) | 576 | Each suppository contains 1 gr. opium. |
| Ointment Galls with Opium (Newfoundland)..... | 6 lbs. | |
| Ointment Hemorrhoidum (Newfoundland)..... | 8 lbs. | |
| Syrup White Pine and Tar (Newfoundland)..... | 800 ozs. | Each fluid ounce contains $\frac{1}{2}$ gr. of heroin. |
| Syrup Bronchial Compound (Newfoundland)..... | 160 ozs. | Each fluid ounce contains $\frac{1}{2}$ gr. heroin. |
| Syrup White Pine Eucalyptol and Honey (Newfoundland)..... | 2,240 ozs. | Each fluid ounce contains 80 minims tincture of opium camphorated. |
| Stoke's Expectorant (Newfoundland)..... | 16 ozs. | Each fluid ounce contains 75 minims tincture of camphor compound. |
| Tincture of Camphor Compound (Newfoundland)..... | 16 ozs. | |
| PILLS AND TABLETS, ETC. | | |
| Tablets Bronchitis Special (Newfoundland)..... | 500 | Each tablet contains $\frac{1}{8}$ gr. of Dovers' powder. |
| " C.T. Cholera Infantum (Newfoundland)..... | 600 | Each tablet contains 3 minims Tincture of camphor compound, B.P. |
| " C.T. Colic Infantile (Newfoundland)..... | 200 | Each tablet contains $1\frac{1}{2}$ minims tincture of camphor compound, B.P. |
| " Coryza (Newfoundland) | 700 | Each tablet contains $\frac{1}{4}$ gr. of morphine. |
| " Diarrhoea (Newfoundland)..... | 500 | Each tablet contains $\frac{1}{8}$ gr. morphine. |
| " C.T. Dovers' Powders (Newfoundland)..... | 9,512 | Each tablet contains 5 gr. of opium. |
| " Fever Improved (Newfoundland)..... | 1,000 | Each tablet contains $\frac{1}{25}$ gr. morphine sulphate. |
| Pills Lead and Opium Acetate (Newfoundland)..... | 2,500 | Each pill contains 1 gr. of opium. |
| Tablets Nausea (Newfoundland)..... | 100 | Each tablet contains $\frac{1}{2}$ gr. cocaine hydrochloride. |
| " Opium Camphor and Tannin (Newfoundland)..... | 500 | Each tablet contains $\frac{1}{2}$ gr. of opium. |
| " Throat Mentholated (Newfoundland)..... | 100 | Each tablet contains 1-280 gr. cocaine muriate. |
| " A.F. Zinc Sulphate Compound (Newfoundland)..... | 12 | Each tablet contains $\frac{1}{2}$ minims tincture of opium. |

TABLE NO. 6—Number of Aliens deported from Canada having been convicted of offences under the Opium and Narcotic Drug Act, during the six calendar years ended December 31, 1927.

| Nationality | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | Total |
|--------------------|------|------|------|------|------|------|-------|
| Chinese..... | 4 | 92 | 125 | 88 | 86 | 55 | 450 |
| Czecho-Slovak..... | | | | 1 | | | 1 |
| East Indian..... | | | | | | 1 | 1 |
| English..... | | 2 | 1 | 1 | | | 4 |
| French..... | | 2 | | 1 | | | 3 |
| Greek..... | | 1 | | | | | 1 |
| Irish..... | | 1 | | | | | 1 |
| Italian..... | | 2 | 2 | 2 | | | 6 |
| Japanese..... | | | 1 | | | | 1 |
| Philippino..... | | 1 | | | | | 1 |
| Roumanian..... | | | | | 1 | | 1 |
| Scotch..... | | | | 2 | | | 2 |
| Swedish..... | | | 1 | | | | 1 |
| U.S. Citizens..... | 11 | 29 | 24 | 24 | 10 | 13 | 111 |
| | 15 | 130 | 154 | 119 | 97 | 69 | 584 |

TABLE No. 7—Amount of Narcotic Drugs seized or removed from Illicit Channels during the fiscal year ended March 31, 1928

| | | | |
|--|----------|----------|----------|
| <i>Opium—</i> | | | |
| Opium crude..... | 2 lbs. | 8 ozs. | |
| Opium, smoking..... | 9 lbs. | 13 ozs. | 98 grs. |
| Opium, seconds (Yen-She)..... | 2 lbs. | 6 ozs. | 430 grs. |
| Opium, powder..... | | 1 oz. | 50 grs. |
| 291 tins of smoking opium containing..... | 145 lbs. | 8 oz. | |
| 7 tins of smoking opium (1 oz.) containing..... | | 7 ozs. | |
| 58 jars of smoking opium (1 oz.) containing..... | 3 lbs. | 10 ozs. | |
| 10 bricks of smoking opium..... | 10 lbs. | | |
| *Decks of smoking opium..... | 119 | | |
| Decks of Yen-She (seconds)..... | 24 | | |
| Pills of opium..... | 16 | | |
| Tincture of camphor compound..... | | 28 ozs. | |
| <i>Morphine—</i> | | | |
| Morphine..... | | 732 ozs. | 262 grs. |
| *Decks of morphine..... | 113 | | |
| Cubes of morphine (approx. 3 grs. each)..... | 15 | | |
| Tablets of morphine..... | 1,666 | | |
| Paveral, btls. (1 oz.), each fluid oz. containing 1 gr. of morphine..... | 14 | | |
| <i>Cocaine—</i> | | | |
| Cocaine..... | | 219 ozs. | 405 grs. |
| *Decks of cocaine..... | 79 | | |
| Tablets of cocaine..... | 6 | | |
| <i>Heroin (Diacetylmorphine)—</i> | | | |
| Heroin..... | | 36 ozs. | 225 grs. |
| *Decks of heroin..... | 34 | | |
| Tablets of heroin..... | 47 | | |
| <i>Alleged Drugs (Miscellaneous) including morphine, cocaine and heroin—</i> | | | |
| Drugs (alleged)..... | | 50 ozs. | 375 grs. |
| *Decks of drugs..... | 91 | | |
| Tablets of drugs..... | 638 | | |
| Cubes of drugs (approx. 3 grs. each)..... | 4 | | |
| <i>Paraphernalia—</i> | | | |
| Opium lamps..... | | | 101 |
| Opium lamp globes..... | | | 13 |
| Opium smoking pipes..... | | | 217 |
| Opium scales (Chinese)..... | | | 22 |
| Opium pipe bowls..... | | | 45 |
| Scrapers opium pipe..... | | | 29 |
| Yen-Hocks (needles)..... | | | 156 |
| Opium tins (empty)..... | | | 240 |
| Syringes hypodermic..... | | | 15 |
| Pharmacist's scales..... | | | 3 |

PROPRIETARY OR PATENT MEDICINE DIVISION

During the fiscal year ended March 31, 1928, 714 medicinal preparations were proposed for registration under the Proprietary or Patent Medicine Act, 491 were assigned registration numbers, and 223 were rejected. The registration of 5,000 preparations was reviewed and 1928 licenses were issued.

The division continued to pay particular attention to the claims made for registered medicines on the labels, wrappers, literature and newspaper advertisements, having regard to the provisions of sections 8(e) and (f) of the Act, which, in effect, prohibit all representations of cure, and false, misleading and exaggerated recommendations.

Over 4,300 pieces of printed matter including labels, wrappers, circulars, pamphlets and newspaper advertisements, were criticized. Of this number 1,389 modifications were required, 31 of which were improper newspaper advertisements.

Nineteen seizures were made: seven for improper labelling; one as containing cocaine; two for changing formula and using alcohol without sufficient medication; nine for selling without a license.

The sale of all secret formula non-pharmacopoeial medicinal preparations in Canada is legalized by this Law on condition that no false, misleading or exaggerated claims or representations of a cure for any disease are made on the labels and wrappers, or in any other manner respecting the article.

*Deck is a small package containing from three to five grains of drugs.

In consequence of these restrictions, the department has ruled that no medicine be accepted for registration under this Act which is directed to be used for any of the following ailments, for the reason that eminent medical authorities hold the opinion that such remedies should be administered only under skilled supervision, and that recommendations for their indiscriminate use by the laity are false, misleading, and fraught with grave danger to public health and life, in that specific treatment might be delayed by their use until alarming symptoms had developed, and the disease had reached a hopeless stage. Another feature in this connection is that many cases of the same kind of disease are attended with different circumstances requiring different treatments, as, for example, some types of Goitre respond to iodine preparations whereas the use of iodine may do positive harm to others.

Remedies for goitre,

| | | |
|---|---|--|
| " | " | gallstones, kidney stones, bladder stones, |
| " | " | high blood pressure, |
| " | " | pneumonia, |
| " | " | pleurisy, |
| " | " | tuberculosis (lupus), |
| " | " | scarlet fever, |
| " | " | diphtheria, |
| " | " | typhoid fever, |
| " | " | tumours, |
| " | " | cancer, |
| " | " | ruptures, |
| " | " | obesity, |
| " | " | producing flesh, |
| " | " | diabetes, |
| " | " | Bright's disease, |
| " | " | arterio sclerosis, |
| " | " | venereal diseases, |
| " | " | blood poisoning, |
| " | " | locomotor ataxia, |
| " | " | infantile paralysis, |
| " | " | spinal meningitis, |
| " | " | erysipelas, |

Earth packs containing medicinal ingredients,

Radium activity remedies,

Remedies for restoring sexual virility,

Specifics,

Abortefacients, etc., etc.

Of the diseases above enumerated, cancer is regarded to-day as the outstanding dreaded disease of the world. Scientific investigation has not produced anywhere the slightest evidence to show that this disease is amenable to medicinal treatment. The dread of cancer and its widespread prevalence have been so exploited by the purveyors of cancer medicines, that it becomes the duty of informed persons to warn the public of the menace that lies in the use of so-called cancer remedies which are put forward by unscrupulous persons or misguided enthusiasts. There is nothing more deplorable or pitiable than the exploitations of the hopes and fears of cancer sufferers in order to enhance the sale of products, which the whole scientific world would pronounce worthless. Cancer research authorities are agreed that time is the vital factor in the treatment of cancer. It is a matter of life and death, and persons who discover cancer in its early stages (i.e. while the disease may still be described as a cancerous growth rather than a true cancer) and resort promptly to competent

skilled treatment, have a chance to get well. Time lost in taking and trying advertised remedies, which are not only useless but frequently increase the misery of the sufferer, results only in the disease gaining such hold that its eradication becomes impossible. It is for these reasons that an earnest endeavour is being made to remove from the market medicinal preparations subject to this Act which are represented in printed advertisements, or by mouth to mouth advertising, as remedies or treatments for cancer. Considerable data, as evidence, has already been procured. At a later date prosecution proceedings will be instituted against all offenders in this regard. Similar action is contemplated respecting manufacturers who recommend medicinal preparations for the other diseases mentioned.

POLLUTION OF INLAND WATERS

It was not until the progress report of the International Joint Commission on the Pollution of Boundary Waters was published that the seriousness of the pollution of the Great Lakes by vessels was appreciated. Vessel sewage was considered next in importance to municipal sewage as a factor in the pollution of the boundary waters. Extensive series of analyses made in 1913 showed that the unrestricted discharge of sewage from vessels (1) menaced the water supplies of Sault Ste. Marie, Michigan, Sault Ste. Marie, Ontario, Port Huron and Sarnia; (2) together with the sewage from towns, polluted the sources of water supply for summer residents and pleasure boats in St. Marys river, lower end of lake Huron, lake St. Clair, and about the Thousand islands; and (3) seriously polluted the waters in the lanes of vessel travel.

In the Final Report of the International Joint Commission issued in 1918, one of the conclusions was that "vessel pollution in certain parts of boundary waters exists to an extent which causes substantial injury to health and property." The commission recommended disinfection of vessel sewage before discharge.

Pollution from vessels is of four kinds: (1) raw sewage in the shape of human excreta, garbage, etc., discharged from toilet and other outlets directly into the lakes; (2) water ballast; (3) dredged material from scows; and (4) oil waste. This pollution affects the public health through contamination of (a) municipal water supplies near their intakes, (b) water supplies of other vessels following or crossing the same routes, and (c) bathing beaches.

The use of water for ballast is largely limited to freight vessels on the Great Lakes and is widely practised. The ballast carried on a large freight vessel is equivalent to from 20 to 60 per cent of the freight tonnage capacity. On a 10,000-ton freighter this is equivalent to 1,500,000 gallons of water. Water ballast is frequently taken aboard in a polluted harbour and discharged in less polluted waters, often within close proximity to some water works intake.

Lake pollution by dredged material is an important public health matter. River dredgings are commonly grossly contaminated by sewage and industrial wastes. Their consistency is often about that of thick cream and if scows encounter heavy seas gross pollution of the adjacent waters results.

The extension of water works intakes farther and farther out from shore corresponds with the encroachment of sewage pollution upon the water supply. Water works intakes at Cleveland, Ohio, have been extended from a point 400 feet out into the lake in 1858 to a point $4\frac{1}{2}$ miles out recently.

There are now at least nine freight vessels and four or five passenger vessels on the Great Lakes using oil for power. In addition there is a considerable number of tankers engaged in the petroleum trade. With the greater use of oil for power by vessels and for general industrial purposes, the extent of oil pollution of the lakes is bound to increase rapidly in the near future.

The question of disposal of sewage and water ballast from lake vessels still remains to be solved. At certain lake ports the pollution due to municipal sewage is considerably greater than that from the vessels, so that regulation of vessel sewage would not be advantageous until the city sewage was disposed of in a more satisfactory manner. It has been demonstrated quite definitely that vessel sewage can be cheaply and easily disinfected by the use of steam before discharge. A practical test of an automatic apparatus designed for this purpose was carried out through two complete seasons upon the lake steamship D. C. Kerr and met with entire success both as to mechanical operation and bacteriological efficiency.

Pollution by water ballast constitutes a more difficult problem. A feasible means for purifying large quantities of ballast water has not been determined as yet. It will probably be sufficient at present to control this practice by suitable regulation designed to limit or prevent the discharge of water ballast in the neighbourhood of intakes and bathing beaches. In the event of failure of such control by regulation more expensive and time-consuming methods of treatment will have to be developed and prescribed.

In the future it is quite possible that the problem of pollution of the lakes by vessels will become more serious with the opening of lake ports to foreign shipping.

Traffic on the Great Lakes has not been limited entirely to traffic between Canada and the United States ports, or port to port traffic in the United States and in Canada. Before and since the war tramp vessels entered the St. Lawrence carrying heavy cargoes as far as Montreal, where a portion was unloaded and then went on to upper lake ports via the various canals.

In 1926 a fleet of ten Norwegian vessels operated between ports in Europe and the Great Lakes. This commerce will bring to the lakes vessels which have hitherto not been operated in accordance with government regulations for lake shipping and may result in the introduction of disease due to contamination of water supplies with sewage from foreign vessels. This commerce will also bring many oil-burning vessels and tankers to the lakes increasing the pollution from this source. During the season of navigation of 1927 a total of 262 vessels entered the Great Lakes from outside seaports. Of this number 14 were vessels in ballast and two were privately owned yachts.

During the season of navigation of 1927 visits were made to a number of the larger passenger vessels engaged in traffic on the St. Lawrence river and through the co-operation of the provincial sanitary engineer of the province of Quebec it was possible to induce the vessel owners concerned to very materially improve the quality of the supplies of water for drinking and culinary purposes available aboard such steamships.

Similarly an effort was made to improve the quality of drinking and culinary water supplies available aboard vessels operated on the inland waters of the western provinces. In this connection water supply systems on vessels engaged in traffic on the Red river and lake Winnipeg in Manitoba were examined as were also the drinking water systems of passenger steamships that operate on Kootenay lake, the Upper and Lower Arrow lakes and Okanagan lake. In addition to which copies of the regulations regarding water for drinking and culinary purposes were supplied to the owners and officers of all passenger steamships operated on the inland waters of the western provinces.

The result of investigations made by R. C. Wallace, F.R.S.C. and associates to determine the nature of the dissolved and suspended materials carried by the Red river, their variation during the summer months and in winter, their relation to the composition of lake Winnipeg and to such contrasted types as the Mississippi and St. Lawrence rivers indicates that the volume of material carried

in solution by the Red river below Winnipeg is four times as great as that carried by the St. Lawrence at Ogdensburg. Comparatively the St. Lawrence is higher in CO_3 , SiO_2 , and in Ca; the Red river is higher in Na, SO_4 and Cl. This is typical of the difference between igneous rock and sedimentary rock erosion. The Red river stands at one end of a series, in which the St. Lawrence river, flowing in its upper reaches through igneous rocks, stands at the other. It may therefore be taken to represent the extreme case of river erosion in sedimentary strata rich in sulphates, with a very marked contribution from brine springs which in themselves have no connection with the surface deposits.

Work in connection with the supervision of vessel water supplies was continued throughout January and February, 1928, through the medium of a series of lectures that were given at the Schools of Navigation and Marine Engineering at various ports on the Great Lakes system. In this manner it was possible to get into contact with the coming generation of ships' masters and engineers under the best circumstances and at a time when questions could be asked and answered. The actual field work was commenced early in March, 1927, and carried on until the close of December. The data for the report submitted have been gathered throughout this period.

During the season of 1927, 1,486 routine visits to Great Lakes vessels were made by Health officials, this total including certain examinations of steamship water supply systems which were carried out in response to the special requests of various steamship operators.

In addition to the physical examination of water supply systems installed on various steamships, information and advice of a technical nature and copies of reports showing the quality of water supplies were supplied to navigation companies. Plans of proposed water supply systems for new steamships in course of construction by various shipbuilders in both Great Britain and Canada on being submitted for the approval of this office were examined and approved if in accordance with the regulations.

During 1926 there were constructed in lake shipyards three of the most modern type of bulk freighters that have a combined capacity of 40,000 gross tons. Shipyards on the St. Lawrence river, the Atlantic coast and Great Britain contributed eleven new ships and the Great Lakes fleet was further augmented by the purchase of six steel steamships, and there were in process of construction in lake shipyards for early delivery in 1927, thirteen more steel steamships, eight of this number being bulk freighters of the largest class. Thus in the last five years the United States and Canadian fleets have been augmented by ninety-eight cargo carriers capable of moving 537,100 gross tons of ore in a single trip. A most extensive program of large ship construction was carried out during the winter of 1926-27 at Great Lakes shipyards. This included seven freighters 600 feet and upwards in length, three steel car ferries, four steel package freighters, a self-unloading cement carrier and an immense passenger steamship for the St. Lawrence river service. At the present time thirteen new ships are being built for Canadian shipowners, including two large passenger steamships with stateroom accommodation for 550 persons aboard each vessel.

The volume of water borne commerce carried on the Great Lakes is not generally appreciated. The traffic of the Great Lakes is nearly as great as the total commerce on all other United States internal waterway systems. It is far in excess of the United States coastwise ocean-borne commerce and exceeds the foreign commerce of the Atlantic Pacific and Gulf.

The number of passengers carried, during the season of 1927 by the larger steamships and ferries that ply into Canadian ports on the Great Lakes and St. Lawrence river as given in detail in the table in the appendix to this report, numbered 20,986,726.

Total traffic for 1926 through the Canadian and United States locks at Sault Ste. Marie aggregated 85,679.087 tons, an increase of 3,803.978 tons over the similar period of 1925.

The number of passengers carried for the period mentioned was 52,704, of which number 62 per cent were carried by Canadian steamships.

A statement of traffic via the Welland canal for the season of 1926 shows a total of 5,640,298 tons carried in 5,866 vessel passages, being an increase of 505 vessel passages and 364,238 tons of freight.

Returns for the port of Toronto show that a total of 4,690 steamships, propellers, tugs and sail and tow vessels were listed as arrivals and departures at this lake harbour for 1925 season of navigation.

The traffic between upper lake ports and lower St. Lawrence ports has increased by leaps and bounds. The bulk of the grain tonnage carried down to Montreal from upper lake ports during 1927 was carried by Canadian vessels which made 9,745 trips, compared with 829 by American ships of all classes. Ships of other nationalities made 189 trips. There was an increase of 148 also in the recorded figures representing the number of ships trading from Montreal to lower ports in the St. Lawrence river and to the Maritime Provinces and Newfoundland.

The traffic movement on the St. Lawrence canals during the season of 1927 was the greatest in their history and amounted to 7,912,952 tons. The total grain movement was 176,355,806 bushels, which was 30,142,415 bushels more than the total shipped out during the twelve months of 1926 at New York, Philadelphia and Baltimore.

Certain vessels engaged in passenger traffic to lake and river ports handled 792,255 passengers in the season of 1927, but in addition to these steamships there is a considerable fleet of smaller vessels plying in and out of Montreal for which no information is available at the present time.

The port of Montreal provides passenger services both up and down the St. Lawrence river. Several organizations such as the Canada Steamship Lines and the Clarke Steamship Company are engaged in this business. Up the St. Lawrence there are services to the Lachine rapids, the Thousand islands, lake Ontario, Toronto, Hamilton and Niagara Falls. Downstream there are services to Quebec, Murray Bay, the Saguenay river, the Gaspé coast and Newfoundland, while another operates from Montreal to Bermuda. The passenger traffic over these lines is enormous.

Fresh water hydrants are located at intervals along the water front of Montreal harbour and several crews of men are kept busy during the season of navigation answering telephoned calls for water for boilers and for drinking purposes for vessels about to sail. A motor truck is used to convey the lengths of hose from the drying towers to the vessels. In 1926 there were 682 vessels supplied with a total of 16,129,990 gallons of fresh water.

An official report for the harbour of Three Rivers, P.Q., for 1926 shows 1,986 steamboats, barges and tugs engaged in inland traffic having passed through this port in addition to 195 canal boats and barges engaged in traffic to points in the United States as well as 110 other vessels of various nationalities engaged in ocean traffic, a very decided increase over the traffic of the previous season.

The record of arrivals and departures of vessels at the port of Quebec for 1926 shows a total of 231 coasting vessels as having arrived from Montreal and the Great Lakes, in addition to 299 coasting vessels that arrived at Quebec from lower St. Lawrence points and seawards.

While there has been a decided improvement in the quality of the water supplied for drinking and culinary purposes aboard a considerable number of the Canadian vessels on the Great Lakes, the constant attention of the persons responsible will be necessary in order that water supplies of standard quality may be always available.

Correspondence and interviews with Health and Navigation officials and other persons concerned were carried on regarding the certification of water supplies available at various ports. In this connection visits have been made to nearly all of the Canadian ports on the Great Lakes system to study in detail the facilities available for the supply of drinking and culinary water from certified shore sources.

The interest taken by vessel operators in regard to the drinking and culinary water service is best expressed in the words of a prominent official of the largest Canadian company in a letter last summer. He wrote: "We are keenly desirous to have the drinking water supplies on all passenger and freight vessels of the very best quality."

Throughout the season steamship companies operating vessels in Great Lakes traffic have been supplied regularly with copies of water analyses reports and wherever it has seemed advisable, attention of the management of these organizations was drawn to flagrant carelessness or violation of the regulations.

The amount of office work has grown appreciably coincident with the enlargement of the field of operations and co-operation with other Government departments.

That, since the regulations concerning water for drinking and culinary purposes on vessels navigating on the Great Lakes of Canada became effective, there has been a decided reduction in the number of typhoid fever patients put ashore from such vessels is very clearly indicated by the diagram showing the comparative number of typhoid fever cases on Canadian and United States vessels in Great Lakes traffic in the period 1920 to 1927.

This report is in reality a summary of the results of the co-operation of various Health officials at Great Lakes ports and the definite efforts of eighteen of these persons to secure the maintenance of supplies of water for drinking and culinary purposes of the standard of the regulations. As during the seasons of navigation of 1923, 1924, 1925 and 1926, vessels have been boarded by Canadian Health officials at the ports of Montreal, Kingston, Cobourg, Toronto, Welland canal, Chatham, Windsor, Owen Sound, Midland, Port McNicoll, Sault Ste. Marie, Port Arthur and Fort William. The findings of the subsequent analyses of water samples thus obtained have emphasized the necessity for general compliance with the regulations and have been also a powerful aid in accomplishing the improvements made to the water systems of various vessels.

The sudden death of Mr. R. K. Leslie, of the Provincial Department of Health, at Owen Sound, in midsummer put an end to the very valuable co-operative work that he had been doing in that district since June, 1923.

At the urgent request of various steamship operators concerned and the Director of the Branch Laboratory of the Provincial Department of Health, Sault Ste Marie, Ont., the matter of the water supply available at the Government docks at Sault Ste. Marie was taken up with the Department of Public Works and substantial improvements were subsequently made.

In accordance with a request from the Deputy Minister of the Department of Public Works a visit was made to Fort Frances, Ont., to examine and report upon matters of sanitation that will be involved in the proposal to raise the maximum elevation of the surface of the waters in Rainy lake and Rainy river.

To facilitate the elimination of contamination from the water supply systems of vessels engaged in navigation on the Great Lakes, through the courtesy of the Department of Marine, arrangements have been made to communicate by wireless with vessels whose water supplies indicate very serious contamination. At the request of the Assistant Deputy Minister of Marine an investigation and report was made regarding the sanitary conditions aboard the Canadian Government steamships *Stanley*, *Mikula* and *Lady Grey* at Quebec with special reference to a reported outbreak of typhoid fever.

Regarding the supervision of water supplies for drinking and culinary purposes on railway trains engaged in international and interprovincial traffic, details of this matter have been taken up with the officials of the United States Public Health Service, the various Canadian Departments of Health and the railway companies concerned. Preliminary reports have been received respecting the sources and quality of such water supplies and where these were shown to be contaminated notification of that condition has been sent to the railways interested.

That more care should be exercised regarding drinking water supplies aboard passenger trains is only too evident, it was noted on one occasion at a divisional filling point that the hose used to fill the drinking water tanks was dragged across the dirty muddy roadbed and no attempt made to clean the nozzle before it was inserted into the tank of a passenger coach.

In this connection it is of interest to note that the total number of passengers carried by all of the steam railroads of Canada during the year ended December 31, 1926, was 42,686,166 persons.

TABLE No. 1

The total number of cases of typhoid fever reported as originating aboard Canadian vessels navigating the waters of Lakes Superior, Huron, Erie and Ontario during 1926 was 4, as indicated in the attached schedule.

During the same period the number of cases of typhoid fever reported as originating from vessels of United States ownership (including ss. Lake Gaither) was 28.

TYPHOID FEVER PATIENTS FROM GREAT LAKES STEAMSHIPS

| Steamship | Owners | Number of Cases reported | From where reported | Date | Remarks—Patient's name, etc. |
|-------------------------------|----------------------------|--------------------------|------------------------------------|---------------|---|
| Tug..... | Reid Wrecking Company..... | 1 | Dr. J. W. S. McCullough..... | June 6, 1926 | W. Woodside, deck hand. |
| <i>Watkins F. Nisbet</i> | Eastern Steamship Co..... | 1 | Dr. Donald McKay, Collingwood..... | July 13, 1926 | C. Woolner, seaman. |
| <i>Elmbay</i> | Tree Line Limited..... | 1 | Dr. J. W. S. McCullough..... | July 30, 1926 | A. Marleau, seaman. |
| Not stated..... | Key Line, Limited..... | 1 | Dr. J. W. S. McCullough..... | 1926 | Charles Gregg, Kingston; died from typhoid fever. |

TABLE No. 2—CASES OF TYPHOID FEVER REPORTED FROM GREAT LAKES PORTS

| Municipality | Year | Number of | | Remarks, increase, etc. |
|---------------------|------|-----------|--------|---|
| | | Cases | Deaths | |
| Montreal..... | 1927 | 5,121 | 553 | |
| | 1926 | 93 | 49 | |
| | 1925 | 161 | 56 | 5 directly from steamships. |
| | 1924 | 139 | ..... |  |
| | 1923 | 169 | 47 | 4 directly from steamships. |
| | 1922 | 271 | 63 | |
| | 1921 | 187 | 62 | |
| Kingston..... | 1926 | ..... | ..... | 2 directly from steamships. |
| | 1924 | 6 | ..... | All from outside of Kingston. |
| | 1923 | 9 | 2 | 1 directly from steamships. 6 originated outside of Kingston. |
| | 1922 | A few | ..... | Report of Dr. Williamson. |
| Oshawa..... | 1921 | 6 | ..... | " " |
| | 1925 | 1 | ..... |  |
| | 1923 | 8 | ..... |  |
| | 1921 | 6 | ..... |  |
| Toronto..... | 1925 | 43 | ..... | 9 21 contracted infection outside of city. |
| | 1924 | 39 | ..... | 29 originated outside of city. |
| | 1923 | 85 | ..... | 2 directly from steamships. 66 originated outside of city. |
| Hamilton..... | 1927 | 3 | ..... | Probably infected outside of city. |
| | 1926 | 1 | ..... |  |
| | 1925 | 18 | ..... | 10 were infected outside of the city. |
| | 1924 | 13 | ..... | 6 from outside of the city. |
| | 1923 | 13 | 4 | 9 cases infected outside of city. |
| | 1922 | 21 | 1 | |
| | 1921 | 21 | 3 | |
| St. Catharines..... | 1923 | 13 | 2 | 1 from steamships, increase of 11. |
| | 1922 | 2 | 1 | |
| | 1921 | 13 | ..... | All contracted outside of city. |
| Welland..... | 1926 | ..... | ..... | None from vessels. |
| | 1925 | 20 | 5 | 8 originated outside of Welland. |
| | 1924 | 19 | ..... | 2 directly from steamships. |
| | 1923 | 10 | ..... | 3 directly from steamships. |
| | 1922 | 14 | ..... | 3 directly from steamships. |
| | 1921 | 4 | ..... |  |
| Chatham..... | 1924 | 1 | ..... | 1 case from lake steamship. |
| | 1923 | 1 | ..... |  |
| | 1922 | 11 | 4 | |
| Windsor..... | 1926 | ..... | ..... | 2 directly from steamships. |
| | 1925 | ..... | ..... |  |
| | 1924 | 12 | ..... | 1 directly from steamships. |
| | 1923 | 24 | ..... | 3 directly from steamships. |
| | 1922 | 15 | ..... | 3 directly from steamships. |
| | 1921 | ..... | ..... | 1 from steamship. |
| Sarnia..... | 1926 | ..... | ..... | 1 case from tug, Reid Wrecking Co. |
| | 1925 | 6 | ..... | 1 case from steamship <i>Sarnolite</i> . |
| | 1924 | 10 | 2 | None. |
| | 1923 | 2 | ..... | Both being employees of vessel companies. |
| | 1922 | 5 | ..... | 4 directly from steamships. |
| | 1921 | 4 | ..... | 3 directly from steamships. |
| Collingwood..... | 1926 | ..... | ..... | 1 from Great Lakes vessel. |
| | 1925 | ..... | ..... | None from steamships. |
| | 1924 | ..... | ..... | None from steamships. |
| | 1923 | 1 | ..... | 1 directly from vessels. |
| | 1922 | 2 | ..... | 2 from steamships. |
| Owen Sound..... | 1925 | 28 | ..... | 3 An epidemic of typhoid fever in the city. One from lake vessel. |
| Midland..... | 1924 | 8 | ..... | 6 from steamships. |
| | 1925 | ..... | ..... | Two cases from Great Lakes vessels. |
| | 1924 | 2 | ..... | Both from Great Lakes steamships. |
| | 1923 | 11 | ..... | Increase 10, 6 directly from steamships. |
| | 1922 | 1 | ..... | 1 from steamships. |
| | 1921 | 3 | ..... | 2 directly from steamships. |

DEPARTMENT OF HEALTH

TABLE No. 3.—CASES OF TYPHOID FEVER REPORTED FROM GREAT LAKES PORTS
Concluded

| Municipality | Year | Number of | | Remarks, increase, etc. |
|----------------------|------|-----------|--------|--|
| | | Cases | Deaths | |
| Parry Sound..... | 1925 | 3 | | These are two cases infected outside of Parry Sound. This is for Parry Sound district. Increase 3. |
| | 1924 | 2 | ..... |  |
| | 1923 | 13 | ..... |  |
| | 1922 | 14 | | Very bad record. See report of Dr. E. George. |
| | 1921 | 11 | 1 | |
| Sault Ste. Marie.... | 1927 | 9 | | None from steamships. |
| | 1926 | | | None from steamships. |
| | 1925 | 3 | | None from steamships. |
| | 1924 | 1 | | None from steamships. Decrease of 4. |
| | 1923 | 5 | | 2 directly from steamships. |
| | 1922 | 6 | | Decrease of 3, 2 from steamships. |
| | 1921 | 3 | | 1 from steamships. |
| Port Arthur..... | 1926 | | | Increase of 6, 4 originated outside of Port Arthur. |
| | 1925 | ..... | ..... |  |
| | 1924 | ..... | ..... |  |
| | 1923 | 7 | ..... |  |
| | 1922 | 1 | ..... |  |
| | 1921 | 1 | 1 | |
| Fort William..... | 1925 | | | 3 directly from steamships. Increase 6, 11 directly from steamships. Increase 11. Two directly from steamships. 3 directly from steamships. |
| | 1924 | 3 | ..... |  |
| | 1923 | 27 | 1 | |
| | 1922 | 21 | 1 | |
| | 1921 | 10 | 1 | |

TABLE No. 4—TYPHOID STATISTICS

TYPHOID FEVER CASES REPORTED

| Province | Year | Totals | | Increases | | Remarks |
|--------------------|---------|--------|--------|-----------|--------|--|
| | | Cases | Deaths | Cases | Deaths | |
| Nova Scotia..... | 1927 | 92 | | | | There was a total of 193 from Enteritis and Diarrhoca in 1925. |
| | 1926 | 43 | 16 | ..... | ..... |  |
| | 1925 | 91 | 24 | ..... | 3 | |
| | 1924 | 123 | 24 | 10 | ..... |  |
| | 1923 | 113 | 33 | ..... | ..... |  |
| New Brunswick..... | 1927 | 241 | 28 | 118 | 8 | |
| | 1926 | 123 | 20 | ..... | ..... |  |
| | 1925 | 187 | 17 | ..... | ..... |  |
| | 1924 | 233 | 18 | ..... | ..... |  |
| | 1923 | 402 | 28 | ..... | ..... |  |
| Quebec..... | * 1927 | 5,866 | | | | Increase. |
| | 1926 | ..... | 256 | ..... | ..... |  |
| | 1925 | ..... | 236 | ..... | ..... |  |
| | 1924-25 | 562 | 316 | | | Epidemic at St. Jerome. |
| | 1923-24 | 893 | 334 | 60 | ..... |  |
| | 1922-23 | 833 | 326 | ..... | ..... |  |
| Ontario..... | 1927 | 753 | | 172 | | Decrease. Outbreak at Courtright and Owen Sound. Port Colborne epidemic. Cochrane epidemic. |
| | 1926 | 581 | 77 | 278 | 7 | |
| | 1925 | 859 | 70 | ..... | ..... |  |
| | 1924 | 833 | 76 | ..... | ..... |  |
| | 1923 | 1,663 | 212 | 1,087 | 85 | |
| | 1922 | 576 | 127 | ..... | ..... |  |
| Manitoba..... | 1927 | 108 | | | | |
| | 1926 | 128 | 18 | ..... | ..... |  |
| | 1925 | ..... | 23 | ..... | ..... |  |
| | 1924 | 81 | 20 | ..... | ..... |  |
| | 1923 | 110 | 24 | ..... | ..... |  |
| | 1920 | 192 | ..... | ..... | ..... |  |

TABLE No. 4—TYPHOID STATISTICS—*Concluded*

TYPHOID FEVER CASES REPORTED

| Province | Year | Totals | | Increases | | Remarks, |
|-----------------------|------|--------|--------|-----------|--------|---|
| | | Cases | Deaths | Cases | Deaths | |
| Winnipeg City..... | 1926 | 66 | 8 | | | 13 while travelling outside city; 9 contracted disease while travelling. Report for Winnipeg states that 15 persons contracted typhoid while travelling outside of city in 1923. |
| | 1925 | 42 | 6 | ..... | ..... |  |
| | 1924 | 36 | 6 | 10 | ..... |  |
| | 1923 | 26 | 5 | ..... | ..... |  |
| Saskatchewan..... | 1927 | 82 | | | | Decrease. Increase over 1921. |
| | 1926 | 115 | 30 | ..... | ..... |  |
| | 1925 | 223 | 39 | 140 | 2 | |
| | 1924 | 83 | 37 | 68 | 26 | |
| | 1923 | 151 | 63 | ..... | ..... |  |
| | 1922 | 249 | 71 | 66 | ..... |  |
| Alberta .. | 1927 | 62 | | | | Decrease. |
| | 1926 | ..... | 16 | ..... | ..... |  |
| | 1925 | 127 | 27 | 29 | 3 | |
| | 1924 | 98 | 24 | 57 | 12 | |
| | 1923 | 155 | 36 | ..... | ..... |  |
| | 1922 | 169 | 50 | ..... | ..... |  |
| British Columbia..... | 1926 | 64 | 17 | 45 | | Decrease of 45. |
| | 1925 | 109 | 12 | ..... | ..... |  |
| | 1924 | 109 | 15 | 30 | ..... |  |
| | 1923 | 79 | 12 | ..... | ..... |  |

* From the above figures it will be seen that during 1926 more than half of all the deaths from typhoid fever for all the provinces of Canada, occurred in the province of Quebec. The percentage for the epidemic year, 1927, is of course very much greater.

MARINE HOSPITALS SERVICE

The Marine Hospitals Service is operated in conformity with the provisions of chapter 186, Canada Shipping Act (Sick and Distressed Mariners).

During the year the department operated two marine hospitals, namely at Sydney and Lunenburg in the province of Nova Scotia. At the larger ports contracts were made with the local hospitals for the treatment of sick sailors at fixed per diem rates. At ports of lesser importance the department operated emergency hospitals, and at smaller outports satisfactory arrangements were made for their care and treatment through the agency of the collectors of inland revenue. The following is a list of the hospitals which were under contract with the department during the year 1927-28:—

NOVA SCOTIA

| | |
|--------------------|--|
| Amherst | Highland View Hospital. |
| Antigonish | St. Martha's Hospital. |
| Bridgewater | Dawson Memorial Hospital. |
| Glace Bay | St. Joseph's Hospital. |
| Halifax | { Victoria General Hospital. |
| | { City Health Board (Contagious Diseases). |
| | { Tuberculosis Hospital. |
| Kentville | Nova Scotia Sanatorium (Tuberculosis). |
| Middleton | Soldiers' Memorial Hospital. |
| New Glasgow | Aberdeen Hospital. |
| North Sydney | Hamilton Memorial Hospital. |
| Pictou | Pictou Cottage Hospital. |
| Springhill | Springhill Cottage Hospital. |
| Windsor | Payzant Memorial Hospital. |
| Yarmouth | { Yarmouth Hospital. |
| | { Clinic Infirmary. |

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NEW BRUNSWICK

| | |
|-------------------|--|
| Bathurst | James H. Dunn Hospital. |
| Campbellton | Hôtel-Dieu. |
| Chatham | Hôtel-Dieu. |
| Moncton | Moncton Hospital. |
| River Glade | Jordan Memorial Sanatorium (Tuberculosis). |
| St. John | General Public Hospital. |
| | St. John County Hospital (Tuberculosis). |
| St. Stephen | Chipman Memorial Hospital. |
| Tracadie | Hôtel-Dieu. |

PRINCE EDWARD ISLAND

| | |
|---------------------|--------------------------------|
| Charlottetown | Charlottetown Hospital. |
| | Prince Edward Island Hospital. |
| Summerside | Prince County Hospital. |

QUEBEC

| | |
|-------------------------------|--|
| Chicoutimi | Hôtel-Dieu. |
| Lachine | General Hospital. |
| Lake Edward | Lake Edward Sanatorium (Tuberculosis). |
| Levis | Hôtel-Dieu. |
| Montreal | Montreal General. |
| | Notre Dame. |
| | Hôtel-Dieu. |
| | Royal Victoria. |
| | St. Paul's (Contagious diseases). |
| | Alexandra (Contagious diseases). |
| | Grace Dart Home (Tuberculosis). |
| | St. Mary's. |
| | Convalescent Home. |
| Quebec | Hôtel-Dieu. |
| | Jeffery Hale's. |
| | Civic Hospital (Contagious diseases). |
| | Laval Hospital (Tuberculosis). |
| Sorel | Hôpital général. |
| Sainte-Agathe-des-Monts | Laurentian Sanatorium (Tuberculosis). |
| Saint-Jean | Hôpital Saint-Jean. |
| Three Rivers | Hôpital Saint-Joseph. |

BRITISH COLUMBIA

| | |
|-----------------------|--|
| Anyox | Anyox General Hospital. |
| Alert Bay | St. George's Hospital. |
| Bella Bella | R. W. Large Memorial Hospital. |
| Chemainus | Chemainus General Hospital. |
| Cumberland | General Hospital. |
| Duncan | King's Daughters' Hospital. |
| Ladysmith | General Hospital. |
| Nanaimo | Nanaimo Hospital. |
| New Westminster | St. Mary's Hospital. |
| Ocean Falls | Ocean Falls Hospital. |
| Port Alberni | West Coast General Hospital. |
| Powell River | St. Luke's Hospital. |
| Prince Rupert | General Hospital. |
| Tranquille | Tranquille Sanatorium (Tuberculosis). |
| Vancouver | St. Paul's Hospital. |
| Victoria | St. Joseph's Hospital. |
| | Provincial Royal Jubilee Hospital. |
| | City Isolation Hospital (Contagious diseases). |

Emergency hospitals were operated at the following ports:—

Nova Scotia.—Arichat, Canso, Liverpool, Lockport, Louisburg, and Shelburne.

Prince Edward Island.—Souris.

Quebec.—Port Alfred.

The total number of sick, distressed, and injured mariners treated during the year 1927-28 was 5,217, and the number of days of hospital treatment was 45,207.

The total expenditure for the year 1927-28 was \$189,969.80; and the total revenue from the collection of Sick Mariners' Dues was \$222,048.08. Detailed information as concerns the expenditure will be found in the financial statement.

A tabular statement of diseases and injuries treated during the year 1927-28 follows.

STATEMENT OF DISEASES AND INJURIES TREATED DURING THE YEAR 1927-28

| | | | |
|--|-----|----------------------------|-------|
| GENERAL DISEASES. | | | 921 |
| Measles..... | 14 | Rheumatism..... | 91 |
| Diphtheria..... | 4 | Anaemia..... | 7 |
| Chicken-pox..... | 1 | New growths—Malignant..... | 11 |
| Mumps..... | 9 | Non-malignant..... | 35 |
| Scarlatina..... | 5 | Cyst..... | 22 |
| Erysipelas..... | 4 | General debility..... | 18 |
| Typhoid fever..... | 32 | Ptomaine..... | 9 |
| Typhoid inoculations..... | 37 | Influenza..... | 175 |
| Tuberculosis..... | 55 | Neurasthenia..... | 17 |
| Malaria..... | 17 | Smallpox..... | 2 |
| Syphilis..... | 166 | Morphinism..... | 1 |
| Gonorrhœa..... | 182 | | |
| Alcoholism..... | 1 | | |
| Beri-beri..... | 6 | | |
| LOCAL DISEASES | | | 2,779 |
| <i>Diseases of the Nervous System</i> | | | 110 |
| 1. Of the nerves..... | | | 17 |
| Neuritis..... | | | 17 |
| 2. Of the spinal cord and membranes..... | | | 2 |
| Deg. of lateral column..... | | | 2 |
| 3. Of the brain and membranes..... | | | 7 |
| Meningitis..... | | | 5 |
| Encephalitis..... | | | 2 |
| 4. Functional and other nervous diseases, etc..... | | | 84 |
| Apoplexy..... | | | 5 |
| Paralysis..... | | | 10 |
| Epilepsy..... | | | 4 |
| Neuralgia..... | | | 19 |
| Headache..... | | | 6 |
| Myalgia..... | | | 34 |
| Insomnia..... | | | 3 |
| Dementia præcox..... | | | 1 |
| Melancholia..... | | | 2 |
| <i>Diseases of the Eye</i> | | | 9 |
| Conjunctivitis..... | 59 | Strabism..... | 1 |
| Choroiditis..... | 4 | Keratitis..... | 3 |
| Ulcer cornea..... | 12 | Blepharitis..... | 1 |
| Iritis..... | 6 | Stye..... | 2 |
| Pan-opthalmitis..... | 4 | | |
| <i>Diseases of the Ear</i> | | | 110 |
| Cerumen..... | 35 | Mastoiditis..... | 7 |
| Otitis media..... | 52 | Otalgia..... | 8 |
| Otitis externa..... | 8 | | |
| <i>Diseases of the Nose</i> | | | 32 |
| Rhinitis..... | 14 | Coryza..... | 11 |
| Abscess..... | 1 | Frontal sinus..... | 1 |
| Epistaxis..... | 2 | Deviated septum..... | 3 |
| <i>Diseases of the Circulatory System</i> | | | 64 |
| Heart disease (valvular)..... | 17 | Endocarditis..... | 2 |
| Tachycardia..... | 1 | Myocarditis..... | 6 |
| Arterio-sclerosis..... | 2 | Angina pectoris..... | 5 |
| Varicose veins..... | 19 | Cardialgia..... | 10 |
| Goitre..... | 1 | | |
| <i>Diseases of the Respiratory System</i> | | | 358 |
| Bronchitis..... | 126 | Empyema..... | 2 |
| Tonsilitis..... | 108 | Pleurisy..... | 41 |
| Pneumonia..... | 29 | Asthma..... | 15 |
| Broncho-pneumonia..... | 1 | Hemorrhage lungs..... | 4 |
| Laryngitis..... | 13 | Abscess lungs..... | 1 |
| Congestion lungs..... | 18 | | |

| | | | |
|---|-----|-----------------------------|-----|
| <i>Diseases of the Digestive System</i> | | 951 | |
| Dental caries..... | 242 | Diarrhoea..... | 24 |
| Toothache..... | 36 | Constipation..... | 35 |
| Alveolar abscess..... | 14 | Hernia..... | 80 |
| Enterorrhagia..... | 1 | Dysentery..... | 11 |
| Quinsy..... | 7 | Enteritis..... | 18 |
| Pharyngitis..... | 25 | Dyspepsia..... | 25 |
| Ulcerated stomach..... | 23 | Hepatic colic..... | 8 |
| Gastritis..... | 91 | Gastro-enteritis..... | 18 |
| Indigestion..... | 93 | Intestinal obstruction..... | 7 |
| Pyorrhoea..... | 4 | Cholecystitis..... | 5 |
| Fistula..... | 1 | Ulcer duodenum..... | 26 |
| Hemorrhoids..... | 32 | Peritonitis..... | 2 |
| Appendicitis..... | 88 | Abdominal adhesions..... | 4 |
| Colitis..... | 8 | Hemorrhage stomach..... | 2 |
| Jaundice..... | 16 | | |
| <i>Diseases of the Lymphatic System</i> | | 22 | |
| Adenitis..... | 22 | | |
| <i>Diseases of the Generative System</i> | | 140 | |
| Urethritis..... | 21 | Hydrocele..... | 12 |
| Stricture..... | 16 | Orchitis..... | 28 |
| Paraphimosis..... | 3 | Phimosis..... | 5 |
| Chaneroids..... | 19 | Epididymitis..... | 27 |
| Varicocele..... | 9 | | |
| <i>Diseases of the Urinary System</i> | | 88 | |
| Nephritis..... | 21 | Hematuria..... | 4 |
| Renal colic..... | 3 | Pyelitis..... | 2 |
| Cystitis..... | 20 | Diabetes..... | 3 |
| Prostatitis..... | 24 | Albuminaria..... | 3 |
| Retention..... | 1 | Phosphaturia..... | 1 |
| Renal calculus..... | 6 | | |
| <i>Diseases of the Organs of Locomotion</i> | | 203 | |
| Osteitis..... | 6 | Periosteitis..... | 4 |
| Sciatica..... | 17 | Synovitis..... | 25 |
| Lumbago..... | 66 | Arthritis..... | 50 |
| Osteo-myelitis..... | 8 | Neurosis..... | 1 |
| Bursitis..... | 18 | Myositis..... | 3 |
| Sinusitis..... | 5 | | |
| <i>Diseases of the Connective Tissues</i> | | 324 | |
| Cellulitis..... | 203 | Abscess..... | 121 |
| <i>Diseases of the Skin</i> | | 286 | |
| Carbuncle..... | 10 | Ulcers..... | 36 |
| Boils..... | 91 | Whitlow..... | 13 |
| Scabies..... | 24 | Scurvy..... | 3 |
| Erythema..... | 9 | Impetigo..... | 4 |
| Eczema..... | 28 | Psoriasis..... | 5 |
| Herpes zoster..... | 9 | Acne..... | 5 |
| Herpes circinatus..... | 2 | Anthrax..... | 1 |
| Urticaria..... | 7 | Sycosis..... | 4 |
| Dermatitis..... | 35 | | |
| <i>GENERAL INJURIES</i> | | 129 | |
| Multiple injuries..... | 45 | Burns and scalds..... | 84 |
| <i>LOCAL INJURIES</i> | | 1,388 | |
| <i>Contusions</i> | | 81 | |
| <i>Injuries:</i> | | | |
| Face..... | 17 | Toes..... | 19 |
| Eyes..... | 13 | Foot..... | 46 |
| Head..... | 75 | Hand..... | 91 |
| Throat..... | 6 | Thigh..... | 11 |
| Wrist..... | 9 | Ribs..... | 13 |
| Chest..... | 23 | Ankle..... | 22 |
| Scalp..... | 2 | Elbow..... | 15 |
| Fingers..... | 149 | Nose..... | 4 |
| Abdomen..... | 3 | <i>Fractures:</i> | |
| Back..... | 29 | Skull..... | 13 |
| Side..... | 22 | Ribs..... | 57 |
| Hip..... | 7 | Leg..... | 15 |
| Leg..... | 52 | Clavicle..... | 8 |
| Spine..... | 4 | Ischium..... | 1 |
| Knee..... | 44 | Femur..... | 12 |
| Arm..... | 32 | Nose..... | 4 |
| Shoulder..... | 14 | Tibia and fibula..... | 11 |
| Scrotum..... | 1 | Tibia..... | 7 |
| | | Fibula..... | 4 |
| | | Spine..... | 2 |

LOCAL INJURIES—Continued

| | | | |
|----------------------------|----------|------------------------|-------|
| Fractures—Concluded | | | |
| Ulna..... | 5 | Knee..... | 10 |
| Foot..... | 11 | Ankle..... | 25 |
| Os calcis..... | 2 | Clavicle..... | 1 |
| Patella..... | 1 | Shoulder..... | 3 |
| Elbow..... | 1 | Arm..... | 1 |
| Wrist..... | 2 | Wrist..... | 11 |
| Maxillary..... | 8 | Foot..... | 7 |
| Fingers..... | 15 | Chest..... | 1 |
| Ankle..... | 5 | | |
| Arm..... | 14 | Strains | |
| Radius..... | 10 | Side..... | 2 |
| Metacarpal..... | 3 | Foot..... | 4 |
| Scapula..... | 3 | Knee..... | 1 |
| Mandible..... | 1 | Hip..... | 1 |
| Hand..... | 1 | Arm..... | 2 |
| Scaphoid..... | 2 | Leg..... | 1 |
| Pelvis..... | 1 | Abdomen..... | 1 |
| | | Back..... | 13 |
| Dislocations: | 3 | Frost bite..... | 3 |
| Shoulder..... | 3 | | |
| Hand..... | 2 | Foreign bodies: | |
| Foot..... | 1 | Finger..... | 3 |
| Hip..... | 1 | Hand..... | 5 |
| Knee..... | 3 | Eye..... | 55 |
| Clavicle..... | 1 | Chest..... | 1 |
| Elbow..... | 1 | Thigh..... | 1 |
| Finger..... | 3 | X-ray examination..... | 26 |
| | | Malingering..... | 1 |
| Sprains: | | Exposure..... | 3 |
| Leg..... | 2 | Observation..... | 25 |
| Hand..... | 2 | Examination..... | 105 |
| Hip..... | 3 | No diagnosis..... | 9 |
| Back..... | 8 | Gunshot wound..... | 1 |
| | | | |
| General Diseases..... | | | 921 |
| Local Diseases..... | | | 2,779 |
| General Injuries..... | | | 129 |
| Local Injuries..... | | | 1,388 |
| Total..... | | | 5,217 |

QUARANTINE SERVICE

The following organized quarantine stations were maintained during the fiscal year:—

Province of Quebec.—Grosse Isle in the river St. Lawrence (with Father Point as the inspecting base); with Quebec and Montreal Harbours as substations.

Province of Nova Scotia.—Halifax, the Harbour and Lawlor's Island.

Province of New Brunswick.—St. John, the Harbour and Partridge Island.

Province of British Columbia.—William Head, Victoria, with Vancouver, Esquimalt, New Westminster and their respective harbours, as substations.

Each organized quarantine station is in charge of a medical quarantine officer.

A substation is a port of final destination to which vessels may go after procuring pratique at an organized quarantine station, and where, following discharge of cargo, they can with greater facility be fumigated or disinfested, and where other functions may, when required, be performed as directed by the Department.

Each substation is in charge of the chief or senior immigration medical officer, except when otherwise provided by the Department.

The following table shows the number of vessels and personnel inspected at the several stations:—

| Station | Vessels inspected | Passengers | | | Crews | Cattlemen, stowaways, distressed seamen, etc. | Total persons inspected |
|--|-------------------|-------------|-------------|---|---------|---|-------------------------|
| | | First class | Cabin class | Tourist third, third class and steerage | | | |
| Province of Quebec— Father Point..... | 1,159 | 4,196 | 24,179 | 86,626 | 92,409 | 357 | 207,767 |
| Province of Nova Scotia— Halifax..... | 550 | 4,099 | 23,617 | 102,158 | 72,390 | 59 | 202,323 |
| Province of New Brunswick— St. John..... | 319 | 1,760 | 852 | 17,760 | 20,434 | 42 | 40,848 |
| Province of British Columbia— William Head..... | 889 | 7,097 | 3,750 | 15,566 | 56,603 | 23 | 83,039 |
| Totals..... | 2,917 | 17,152 | 52,398 | 222,110 | 241,836 | 481 | 533,977 |

Persons to the number of 78 were detained in quarantine. Of these, 32 were hospitalized on account of sickness; the remainder were either contacts under observation or members of families accompanying those in hospital.

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY STATIONS

| Station | Sick | Hospital days | Contracts and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|--|------|---------------|---|--------------------------|------------------------|---|
| Quebec, P.Q. (Grosse Isle).... | 3 | 49 | 11 | 87 | 14 | 136 |
| Halifax, N.S. (Lawlor's Island) | 1 | 16 | ..... | ..... | 1 | 16 |
| St. John, N.B. (Partridge Island)..... | 17 | 376 | 25 | 363 | 42 | 739 |
| Victoria, B.C. (William Head) | 11 | 139 | 10 | 191 | 21 | 330 |
| Totals..... | 32 | 580 | 46 | 641 | 78 | 1,221 |

DISTRIBUTION IN HOSPITAL AND DETENTION BUILDINGS, BY DISEASES

| Final diagnosis | Sick | Hospital days | Contacts and persons accompanying sick | Detention period in days | Total persons detained | Total days in hospital and detention quarters |
|--------------------------------|------|---------------|--|--------------------------|------------------------|---|
| Bronchitis..... | 1 | 5 | ..... | ..... | 1 | 5 |
| Bubo, inguinal idiopathic..... | 1 | 16 | ..... | ..... | 1 | 16 |
| Chickenpox..... | 2 | 44 | 2 | 44 | 4 | 88 |
| Diphtheria..... | 2 | 12 | 4 | 26 | 6 | 38 |
| Measles..... | 12 | 260 | 18 | 301 | 30 | 561 |
| Observation, pyrexia..... | 2 | 9 | 5 | 23 | 7 | 32 |
| Ptomaine poisoning..... | 1 | 10 | ..... | ..... | 1 | 10 |
| Scarlet fever..... | 3 | 100 | 4 | 144 | 7 | 244 |
| Smallpox..... | 2 | 39 | 8 | 63 | 10 | 102 |
| Smallpox suspect..... | 1* | 4 | 3 | 12 | 4 | 16 |
| Sore throat, septic..... | 2 | 35 | 1 | 2 | 3 | 37 |
| Syphilis..... | 1 | 14 | ..... | ..... | 1 | 14 |
| Tonsillitis..... | 1 | 6 | ..... | ..... | 1 | 6 |
| Typhus..... | 1 | 26 | 1 | 26 | 2 | 52 |
| Totals..... | 32 | 580 | 46 | 641 | 78 | 1,221 |

*Later diagnosed as non-infectious skin eruption.

COMPULSORY FUMIGATION OF SHIPS

Facilities for fumigating ships for the destruction of rats, etc., either by the cyanide or sulphur dioxide method, in accordance with section 37 of the Quarantine Regulations, now exist at the ports of Montreal, Quebec, Three Rivers, Chicoutimi, and Port Alfred, province of Quebec; St. John, N.B.; Halifax and North Sydney, N.S.; Vancouver, Prince Rupert, and William Head (Victoria), B.C.

The following table summarizes the work done at the respective ports:—

DERATIZATION OF SHIPS

| Port | Method of rat destruction employed | | Certificates of deratization issued | Dead rats recovered | Deratization exemption certificates issued |
|-------------------------|------------------------------------|--------------------------------|-------------------------------------|-----------------------|--|
| | Fumigation by sulphur dioxide | Fumigation by hydrocyanic acid | | | |
| Montreal, P.Q..... | | 119 | 119 | 1,131 | 102 |
| Halifax, N.S..... | 23 | 5 | 28 | Rats Mice 87 74 | 5 |
| St. John, N.B..... | 13 | | 13 | 233 | |
| Quebec, Que..... | 10 | | 10 | 11 | 2 |
| Three Rivers, Que..... | 1 | | 1 | 12 | |
| Port Alfred, Que..... | 6 | | 6 | | |
| North Sydney, N.S..... | 10 | | 10 | | |
| Vancouver, B.C..... | 44 | 116 | 160 | 478 | |
| William Head, B.C..... | 11 | | 11 | 114 | |
| Prince Rupert, B.C..... | 9 | | 9 | 91 | |
| Totals..... | 127 | 240 | 367 | Rats Mice 2,157 74 | 109 |

The following extracts are from reports received from the respective quarantine officers:—

GROSSE ISLE, QUEBEC (Medical Superintendent, Dr. G. E. Martineau)

"Infectious or contagious diseases were reported on 67 occasions, from 24 steamers. These included all the minor infectious diseases. On two occasions modified smallpox was found (on the ss. *Andania* and *Ausonia*). These cases were among the crews.

"On October 11, the ss. *Canadian Trapper* arrived from Halifax, having landed a case of smallpox there and leaving before any action had been taken by the local authorities. On instructions from the Department, this vessel was stopped at Grosse Isle, where the necessary action was taken.

"Deaths were reported on six occasions on the following vessels, from the causes named: ss. *Letitia*—pneumonia; *Empress of France*—typhoid; *Blair-athol*—hemorrhage of lungs; *Regina*—lost overboard; *Doric*—myocarditis; *Antonia*—following injury.

"Passengers refusing vaccination under the regulations were vaccinated on seven occasions by your quarantine officers. Three who refused vaccination were sent to the Immigration Hospital at Quebec for the necessary period of observation.

"One birth was reported on November 19 on the ss. *Regina*.

"*Fumigation of Vessels.*—There were 198 vessels ordered routine fumigation at the port of Montreal (see Montreal report). Of these, 101 were fumigated and 97 were exempted. In addition, vessels from plague-infected ports, or having called at plague-infected ports since last fumigation, to the number of 23, were ordered 'mandatory fumigation'. Of these, 5 were exempted from fumigation.

"Port of Quebec.—There were 12 vessels ordered to be fumigated at this port. Of these 1 was ordered fumigated by error, and 1 produced, a certificate of recent fumigation. Both were exempted. The remaining 10 were fumigated.

"Port of Three Rivers.—One vessel was fumigated at this port.

"Port of Port Alfred and Chicoutimi.—Six vessels were fumigated at these ports.

"One case of typhus fever, one of smallpox and one suspected case of smallpox were admitted to the hospital of Grosse Isle.

"Typhus fever.—Michael Malinski and his wife, natives of Northern Poland, left Varsau April 22, were examined and deloused at Volskova (?), the station before Danzig. At Danzig they had another inspection for vermin and eyes. They stated no epidemic existed in their native village and that they did not know of any sickness. Embarked at Liverpool on ss. *Montclare* on May 6, arrived at Quebec on the 14th. The man passed the usual line of inspection, but four hours later he was reported by the Red Cross nurse as being sick on the train, with a severe chill and fever. It is not likely that he had much fever at the time of inspection, for in everting the eyelids, as is done in the case of every foreigner, the inspector would undoubtedly have noticed it. We learned later from his wife that the patient had not been very well the last three days on board ship and that he had been given a strong purgative by the ship's surgeon or the dispenser. He was not reported on the bill of health. Asked how he was feeling when he passed the medical inspection in the Immigration building, Quebec, he replied that he was feeling weak only.

"On admission at the Immigration Hospital, Quebec, May 15, about 11 p.m., the patient had a temperature of 104° with a frequent dry cough and was fretful. Next morning, he was reported as having passed a sleepless night and wanted something to make him sleep.

"In the afternoon, May 15, he became delirious with increased restlessness but got more calm during the night. Delirium did not return. The following days he was rational and took willingly the water, milk and medicine offered him. His axillary temperature ranged between 103 and 104, with rapid pulse. His cough, flushed face and sudden chill suggested pneumonia at first, but examination of the chest revealed only a coarse bronchial breathing. Malaria was eliminated by a negative blood examination. Albumin and biliary pigments were present in the urine.

"On the 17th some maculae (8 to 10) were noticed on the abdomen and chest, resembling the rose spots of enteric fever. Next day their number had increased considerably on the legs and arms, chiefly on the flexor surfaces. They were round or oval in form, none were raised, some disappeared on pressure, others did not. The first to appear faded, leaving a dark hue, while the most recent ones were quite red. They came in successive crops, even on the same part of the body; on the 19th and 20th they invaded all the body except the face; there were very few on the neck. Some were petechial, none coalesced. There was some tenderness in the splenic region but no enlargement of the gland.

"On the first appearance of maculae, typhoid fever was at once suspected. A first sero diagnosis was made on the 18th, but no agglutination was obtained with the B. Typhosus and the Para A and B; a second one on the 20th gave a very slight and incomplete agglutination with Para B and none with the Typhosus or Para A. The same day a Weill Felix test was absolutely negative. The patient was then in the sixth day of his illness. In spite of the failure of agglutination of the Proteus X 19, a suspicion of typhus exanthematicus was created by the character of the rash and the concomitant symptoms—initial delirium, flushed face, stupor, dry, brown-coated tongue with very red edges, obstinate constipation, high temperature with almost no morning remission and accelerated pulse.

"The case was diagnosed definitely as typhus fever and on instruction of the department, the patient, and his wife, who had remained in the Immigration building, were transferred to Grosse Isle on the 21st.

"The patient's serum was sent to Dr. Harris, bacteriologist of the Department at Ottawa, and to Dr. Piegay, Immigration Hospital, Quebec, both of whom found that it agglutinated with the proteus X 19, thereby confirming the diagnosis of typhus fever.

"No complications occurring, and the patient having fully recovered, he was released with his wife on June 15.

"Smallpox—One member of the crew of the ss. *Andania* suffering from smallpox was landed at Grosse Isle on August 13, with seven contacts. All the contacts showing immunity or positive reaction after vaccination were released on the 19th, in accordance with the Quarantine Regulations. The patient having fully recovered was released on September 1.

"One member of the crew (musician) ex ss. *Andania*, a suspected case of smallpox, was landed at Grosse Isle with three contacts on November 21. These people were all released on November 24, following diagnosis of non-infectious skin eruption. From the history of this case, as given by the ship's surgeon, also from the kind of rash and the parts of the body where it started and was distributed, combined with the fact that he came from a district infected with smallpox, we at first had every reason to believe that we had to deal with a suspected case of modified smallpox."

LAWLOR'S ISLAND, HALIFAX, N.S. (*Quarantine Officer, Dr. J. V. Gledhill*)

"The following cases of minor infectious disease, with relatives accompanying, were handed over to the Immigration medical officer for treatment in the Rockhead hospital: Measles—25 cases, with 42 accompanying; scarlet fever—1 case, with 4 accompanying; mumps—3 cases, with 4 accompanying; chicken-pox—2 cases, with 5 accompanying; observation for diphtheria—2 cases with 1 accompanying; erysipelas—1 case, with 2 accompanying.

"During the night of January 14, the motor ship *Clydebank* arrived at quarantine from the East Indies. Quarantine inspection was made on Sunday morning, January 15, when the master of the vessel reported one of the Hindu crew had been ill for eight days. Examination of this man revealed an inguinal bubo of unexplained origin. The ship was held in quarantine and the department communicated with by wire. The bubo was aspirated and a smear and cultures made and a guinea pig inoculated, all of which proved negative. Dr. Harris, departmental bacteriologist, who had arrived here in the meantime, however, was of the opinion that this did not exclude the possibility of *Pestis Minor* with few bacilli. The patient was transferred to the quarantine hospital at Lawlor's island on January 19. The following day I dissected out the gland with the assistance of Drs. Rutherford and Macaulay, and smears and cultures made from the pus taken from the gland proved negative. Two guinea pigs were inoculated subcutaneously and two interperitoneally with pus taken from the gland on the 20th. Pending the result of this, the vessel was given permission to dock, breasted off from the wharf, with rat guards on the mooring lines and the lines wrapped with canvas strips coated with fresh tar for three feet, and the cargo destined to Halifax unloaded under quarantine supervision. The animals inoculated on the 20th, still being normal, as also the animals inoculated on the 15th, the ship was released from quarantine at 1 p.m. on Tuesday, January 24, and the vessel thereupon sailed for Boston. A detailed report of the measures taken against this vessel was made by special delivery letter to the quarantine officer at Boston. A diagnosis of Idiopathic Inguinal bubo was made, and on the instructions of the department, the patient was transferred to the Victoria General Hospital, Halifax, on February 3, 1928.

"There were 28 vessels fumigated at this station during the year. On five of them, 87 dead rats were recovered after fumigation, and on two of them 73 dead mice were recovered. On February 28, we fumigated for the first time here with Zyklon-B.

"Other than the routine vaccination of members of the staff requiring it this year, there were no vaccinations performed at this station."

WILLIAM HEAD, B.C. (*Quarantine Officer, Dr. C. P. Brown*)

"There has been an increase of approximately 18 per cent in shipping, a general all-round increase of all nationalities. Accompanying this is a decrease in passenger traffic inspected, the freighters being increased as shown by number of crews and vessels. The effect of the European grain trade is shown by the relative decrease of 7 per cent in vessels from the Orient, and increase of 9 per cent in vessels from Europe.

"General health conditions of traffic have been good. There were two vessels quarantined for smallpox. One was a passenger vessel of the Admiral Orient Line. The ship's surgeon had carried out preliminary vaccination so carefully that it was only necessary to detain the patient. The other was a freighter. The patient and one member of the crew who refused vaccination were detained. This vessel had already passed through the United States Quarantine Service at Gray's Harbour, where vaccination was carried out.

"There have been no violent epidemics of quarantinable disease at ports from which our traffic comes during the year. These diseases have been reported as widespread but in small numbers.

"Plague has been reported from the Straits Settlements at Colombo, Sourabaya, Singapore and Bangkok; from Constantinople, Port Said and Alexandria; from Cape Verde and the Canary Islands; from Oran and Algiers; from South America chiefly at Guayaquil, Callao, Rosario and Rio de Janeiro.

"Smallpox has been reported at almost all ports from which we get traffic.

"Cholera has been reported at Singapore, Manila, Hongkong and Shanghai, but not epidemic.

"Typhus has been reported at Oran, Algiers, Cairo, Alexandria and some North and South American ports.

DETENTION DIVISION

"There were twenty-one total detentions during the year. There were no deaths on the station, although one boy died in the Isolation Hospital at Victoria, from general septicaemia following mastoid infection. He came to us with scarlet fever and was later removed to Victoria for operation. There was a very virulent type of both measles and scarlet fever among the children of white parentage returning from Asia during last summer.

"Outside of our staff and a few of the immediate neighbourhood, there were no vaccinations.

FUMIGATION DIVISION

"Total fumigations are just the same as last year. All fumigations on the coast are now carried out under the personal supervision of a medical officer appointed by the department, and are reported to the Quarantine Officer at William Head. Cyanide, either as the barrel method or as Zyklon-B, is the method of choice at Vancouver. Sulphur has been used exclusively at other ports. During the year eighteen vessels have been ordered fumigation as coming from infected ports.

"Models illustrating ratproofing of vessels and supplied through the kindness of Dr. Grubbs of the U.S.P.H.S., have been exhibited at Vancouver. This has been done with the aim of interesting shipping authorities in this important question. So far, however, there has been very little attempt to carry it out among vessels trading to this coast.

"Notes kept on the deratization of vessels show that the use of cyanide, especially in the form of Zyklon-B, is coming more into favour. The U.S.P.H.S. still does nearly half the fumigating of our total traffic.

LABORATORY

"The laboratory has been kept ready for work. The usual examinations for the station and Bentinck Island have been made.

LAZARETTO, BENTINCK ISLAND

"Equipment, buildings and grounds, generally have been maintained in good order by our staff, supplied with material by the Public Works Department. The Public Works Department completed a fine new building during the year that supplies offices for ourselves and the customs and a residence for the customs officer. We appreciate the added office and storage accommodation very much. They have also rebuilt the shed on the wharf. During the year the telephone line to Victoria has been destrung and put in good condition.

"Quarantine boats under the efficient supervision of the officials at H.M.C. Dockyard, Esquimalt, have undergone extensive repairs. The *Madge* has several new plates. The *Evelyn* was overhauled above the waterline. It has also had several trips to the navy yard for emergency repairs. Both its engine and hull are approaching the limit of safety.

"It is my sad duty to record the death of two members of the staff during the year, that of Dr. H. MacLaren, who died from natural causes September 15, 1927, and of Dr. H. P. Cox, who died following injuries sustained by a fall into the hold of the ss. *Ethelwolf* while on fumigating duty in Vancouver January 9, 1928. All members of your staff here felt the loss of these two associates very much.

"Following the death of Dr. Cox I had the assistance and advice of Dr. W. W. Aylen from January 13 till February 14, 1928, and later of Dr. J. B. Pelouquin from February 22 to March 30, 1928. I appreciated their help very much indeed. The work of the department was carried on without delay to shipping either at William Head or Victoria. I also wish to express my appreciation of the co-operation Dr. Cartwright rendered so willingly during this time. He was also given training in cyanide work at Vancouver and eventually received the appointment.

"Dr. W. W. Aylen's visit also constituted the official visit of inspection from the department for the year.

"During the year the station was visited by Mr. J. B. Hunter, Deputy Minister, Public Works Department, July 30, 1927. Delegates from the British Columbia Hospital Association visited and inspected the station September 8, 1927.

"I would like to express my appreciation of the loyal and efficient co-operation of all members of the staff during the year; also to express my thanks to officials of associated Departments and services, both Dominion and Provincial, with whom I have had official dealings during the year. They have uniformly been cordial and willing to assist in any way."

VESSELS' DESTINATION

| | |
|--|---------------|
| Vancouver..... | 606 = (67.0%) |
| Victoria..... | 200 = (22.5%) |
| New Westminster..... | 45 = (5.0%) |
| Chemainus..... | 11 = (1.2%) |
| Englewood..... | 8 |
| Nanaimo..... | 7 |
| Comox..... | 6 |
| Powell River..... | 2 |
| Port Alberni, Ladysmith, Queen Charlotte City, Prince Rupert.... | 1 each |

DEPARTMENT OF HEALTH

VESSELS' NATIONALITY

| | |
|----------------|----------------|
| British..... | 352 = (39.66%) |
| Japanese..... | 182 = (20.4%) |
| U.S. Amer..... | 134 = (15.0%) |
| Norwegian..... | 74 = (8.3%) |
| Danish..... | 26 = (2.8%) |
| French..... | 24 = (2.7%) |
| Dutch..... | 24 = (2.7%) |
| German..... | 24 = (2.7%) |
| Italian..... | 23 = (2.6%) |
| Swedish..... | 23 = (2.6%) |
| Panama..... | ? |
| Guatemala..... | 1 |

WHERE FROM

| | |
|--------------------------------|---------------|
| Orient..... | 329 = (39.6%) |
| Europe..... | 302 = (34.0%) |
| North America..... | 152 = (17.0%) |
| Australasia..... | 56 = (6.3%) |
| Central and South America..... | 41 = (4.6%) |
| Africa..... | 9 |

TIME OF INSPECTION

| | | | |
|---|---------------|-----------------|---------------|
| Daytime..... | 521 = (58.6%) | Night time..... | 368 = (41.4%) |
| Vessels from ports showing quarantinable disease..... | | | 291 = (33.0%) |
| Vessels requiring fumigation according to Canadian Regulations..... | | | 88 |
| Of these, routine fumigations..... | | | 70 |
| from infected ports..... | | | 18 |
| Vessels quarantined..... | | | 2 |

LABORATORY WORK

| | | |
|---|----|-----|
| Specimens examined, total..... | | 166 |
| Smears examined for leprosy..... | | 70 |
| Positive..... | 39 | |
| Negative..... | 31 | |
| Sputums examined for T.B..... | | 4 |
| Positive..... | 1 | |
| Negative..... | 3 | |
| Blood smears for malaria..... | | 2 |
| Both negative..... | | |
| Urines examined..... | | 4 |
| Rats examined for evidence of bubonic plague..... | | 86 |
| All negative..... | | |

MONTREAL SUBSTATION, P.Q. (Fumigating Officer, Dr. G. E. Beauchamp)

"Every vessel coming to the port of Montreal with a fumigation order from the Quarantine Officer at Father Point was inspected immediately after arrival by the Chief Fumigator, in order to find out if there was evidence, old or recent, of rat infestation, rat harborage or any indication of rats on board the ship. When the inspector's report was positive the fumigation was ordered. When there was no evidence of rat infestation an extension of time for the fumigation of the ship was granted to twelve months from the date of the last fumigation. A certain number of vessels reported as coming from Mediterranean ports or from ports suspected to be infected with plague were also inspected. When the inspection of these vessels did not show evidence of rat infestation an extension of time for the fumigation was also granted. In the case of vessels arriving in the port of Montreal with an order of mandatory fumigation the ships were fumigated, except in seven cases where it was shown, after a careful inspection, that there was no evidence of rat infestation, old or recent, and no other indication of rats on board of the ship. The log book on board the vessels referred to showed that although they had been to infected or suspected infected ports, they had not been tied to the docks but remained in midstream for coaling or to take a certain quantity of cargo brought to the ship by tenders. These exemptions were granted until the ship's return to the port of Montreal, and it was clearly mentioned that the captain would have them to produce a certificate of recent fumigation in another port or the vessel would be fumigated. Two ships exempted from fumigation at their first voyage were fumigated on their return to the port of Montreal later in the season.

"In the months of May, June, September, October and November, owing to the great number of ships coming to Montreal, the harbour master issued an order that all vessels coming in ballast and which were ordered to be fumigated by the quarantine officer at Father Point, should anchor below Longue Pointe until they could have a berth in the harbour. This necessitated the inspection of vessels in midstream. A temporary gasoline launch was provided to take the inspector on board. The cost for the said launch was \$2.50 per hour, paid by each vessel inspected according to the time taken for each inspection. In September, at my request, the Department obtained the loan of a small gasoline launch, the *Little Mike*, with a captain and an engineer, from the Department of Marine, for the inspection and the fumigation of ships in midstream. The charges made against the ships for the use of the said launch were \$3 per hour. This boat was in service from October 3 until November 21, 1927. All vessels loaded coming direct to the harbour were inspected at their dock after the unloading had been completed. No charges were made against the ships for that inspection.

| | |
|--|-----|
| Number of vessels inspected amidstream at Longue Pointe..... | 43 |
| Number of vessels inspected in the harbour..... | 178 |
| Total..... | 221 |

"One hundred and nineteen vessels were fumigated during the navigation season from April to December, 1927. Eleven vessels were fumigated with cyanide (barrel method), and 108 vessels were fumigated with Zyklon-B. The fumigation with Zyklon-B has proved to be very effective, and although this method is more dangerous than the other methods, I am glad to say that no accidents happened, due to precautions taken and to a strict discipline during the fumigation process. Four men, under the direction of Mr. Michel Perrault, chief fumigator, and under the direct supervision of a medical officer, Dr. Bell or myself, were employed for the fumigation of each ship. The transportation of the personnel and material was made by the gasoline launch. The transportation of the members of the crew of each ship ashore was also made by the launch. Transportation of material in the case of vessels fumigated in the harbour was made by a hired automobile truck, and the cost of same, \$3 per hour, was paid by the ships."

| | |
|---|-----|
| Number of vessels fumigated at Longue Pointe..... | 27 |
| Number of vessels fumigated in the harbour..... | 92 |
| Total..... | 119 |

VANCOUVER, SUBSTATION, B.C. (*Fumigating Officer, Dr. C. Cartwright*)

"The following report is made up mostly from the notes and reports left by the late Dr. H. P. Cox, and covers the period from April 1, 1927, to March 31, 1928.

"It will be noted that the figures for boats done by cyanide as against those done by sulphur, practically reverse the figures for 1926-7.

"It will also be noted that there is an apparent falling off in boats fumigated that are arriving from the Orient, but this is probably due to the fact that many Japanese ships are being fumigated in Japan, and many more are being done in American ports before coming to Vancouver.

"The total number of boats fumigated in Vancouver during the past twelve months was 160.

"Of this number 81 were remanded and 79 done by request.

"Of ships fumigated there were:—

| | | |
|--|-----|-----|
| From the Orient..... | 62 | |
| From North America..... | 22 | |
| From Central and South America..... | 13 | |
| From Europe..... | 52 | |
| From Africa..... | 0 | |
| From Australasia..... | 11 | |
| The number of ships fumigated with sulphur was..... | | 44 |
| The number of ships fumigated with cyanide was..... | | 116 |
| The total number of rats picked up was..... | | 478 |
| On ships done by requests..... | 159 | |
| On ships remanded..... | 319 | |
| The total number of rats found after sulphur fumigation was..... | | 31 |
| The total number of rats found after cyanide fumigation was..... | | 447 |

"Of 61 ships reported on that had not been previously examined, 40 were clean and free from rats, 15 were doubtful, and 6 showed definite evidence of the presence of rats. Practically all ships have considerable cover for rats and in only a few have I seen any attempt to screen off places where food is stored so as to make them rat-proof. As for actual rat-proofing I have personally only seen one ship—the ss. *West Camargo*—on which any real attempt had been made to make the ship rat-proof and on this ship I found one rat after fumigation. This one was in No. 2 hold and might have got on board from the dock.

"Inspection of wharves and piers showed that rat-guarding regulations were being enforced."

LEPER STATIONS

Under the Leprosy Act (chapter 136, Revised Statutes, 1906), the department administers two leper colonies, one at Tracadie, N.B., the other at Bentinck Island, B.C.

Tracadie, N.B.—This lazaretto is in charge of Dr. J. A. Langis, medical superintendent, assisted by nursing sisters of the Order of St. Joseph. At the close of the fiscal year, March 31, 1928, there were eight inmates being cared for as compared with eleven the previous year. This reduction was due to two deaths, one in July, 1927, the other in February, 1928; and to the transfer of a Chinese leper patient to the lazaretto at Bentinck Island, B.C.

Of the eight remaining, three have clinical signs of active leprosy; the other five are considered to be arrested cases. The following table furnishes particulars of the respective patients:—

| Patient | Age | Sex | Admitted | Nationality | Where from |
|--------------|-----|-----|---------------------|--------------------------------|---------------------|
| P.D..... | 41 | M. | May, 1909..... | French Acadian..... | Lameque, N.B. |
| O.L..... | 82 | M. | October, 1910..... | French Acadian..... | Negiac, N.B. |
| B.T..... | 75 | F. | October, 1914..... | French Acadian..... | Portage River, N.B. |
| A.D..... | 29 | F. | July, 1918..... | French Acadian..... | Lameque, N.B. |
| J.D..... | 67 | M. | April, 1919..... | French Acadian..... | Lameque, N.B. |
| V. de L..... | 28 | F. | January, 1921..... | Scotch and French descent..... | Toronto, Ont. |
| K. S. L..... | 46 | M. | October, 1922..... | Chinese..... | Montreal, P.Q. |
| J. P..... | 33 | F. | November, 1926..... | Russian..... | Blaine Lake, Sask. |

It will be seen that five of the inmates are French-Acadians. These are natives of Gloucester county, N.B., where leprosy first made its appearance in Canada.

The medicinal treatment was similar to that in past year, viz., the ethyl esters of the fatty acids of chaulmoogra and hydnocarpus oils, supplemented by benzocaine and olive oil and a French preparation "Hyrganol Iode".

Bentinck Island, B.C.—This leper station is in charge of Dr. C. P. Brown, medical superintendent of the quarantine station at William Head, B.C., to which Bentinck Island is adjacent. At the close of the fiscal year there were eleven male patients being cared for, this number being one additional as compared with the previous year. Two patients died during the year—a Chinese admitted on April 26, 1927, very far advanced in terminal exhaustion from lesions, due to the disease, on May 23, 1927; and A.B., a Russian Jew, on February 13, 1928, who had been a patient at the lazaretto since 1921.

There were three new admissions during the year, one, referred to in the preceding paragraph, whose illness ended fatally; a Chinese admitted on October 5, 1927, from the Vancouver General Hospital; and the third, a Chinese, transferred from the lazaretto at Tracadie, N.B. The following table furnishes particulars of the respective patients.

| Patient | Age | Admitted | Nationality | Where from |
|---------------|-----|-------------------------|-----------------|--------------------------|
| F. H. | 42 | August 28, 1916. | Chinese. | Vancouver, B.C. |
| C. K. W. | 43 | October 4, 1918. | Chinese. | Vancouver, B.C. |
| L. A. | 31 | November 28, 1918. | Chinese. | Victoria, B.C. |
| L. B. | 37 | December 23, 1920. | Chinese. | Vancouver, B.C. |
| C. K. | 48 | March 31, 1922. | Chinese. | Victoria, B.C. |
| J. L. | 32 | August 5, 1923. | Chinese. | Vancouver, B.C. |
| E. D. | 34 | January 31, 1924. | Doukhobor. | Veregin, Sask. |
| M. J. | 31 | May 31, 1924. | Chinese. | Vancouver, B.C. |
| W. K. D. | 43 | October 28, 1925. | Chinese. | Nanaimo, B.C. |
| W. H. F. | 26 | October 5, 1927. | Chinese. | Vancouver, B.C. |
| W. S. | 37 | November 16, 1927. | Chinese. | Tracadie Lazaretto, N.B. |

The condition of these patients may be summarized as follows:—

Six show clinical signs of present active disease.

Two have discharging sinuses on feet, the result of damage done by the disease.

Two have no active clinical signs of the disease, but have had mixed positive and negative smears.

One has no active clinical signs of the disease, and is bacteriologically negative.

Medicinal treatment consists of chaulmoogra oil capsules, with "Moogol" injected intramuscularly, supplemented by a preparation manufactured according to the formulæ of Sir Leonard Rogers called "Alepol" which is a combination of lower melting point fatty acid derivatives than the "Moogol". The protein shock induced by injection intramuscularly of 3 cc. of milk has also been tried. Dr. Brown reports it is impossible as yet to express an opinion as to the value of these special treatments.

The lepers are housed in cottages, each with his own room and outfit, and look after themselves as far as practicable. Two male caretakers and a trained female nurse are in immediate charge of the leper colony, under the supervision of the quarantine medical officer, who visits the island at weekly intervals, or oftener if needed. The completion of additional cottages now provides available space for six more patients.

IMMIGRATION MEDICAL SERVICE

Ocean passengers, immigrants and non-immigrants (tourists, etc.), to the number of 137,941 were medically inspected at Canadian ports on the Atlantic and Pacific coasts during the fiscal year. In addition 1,646 persons en route to Canada by way of the ports of New York and Boston were medically inspected by officers of the United States Public Health Service.

The following tables show (a) the monthly arrivals by ports, and (b) a comparison with the figures of the previous fiscal year.

(a) IMMIGRANTS AND NON-IMMIGRANTS MEDICALLY INSPECTED AT OCEAN PORTS

| 1927-28 | Quebec | | Halifax | | St. John | | Montreal | | Vancouver | | Victoria | | Sydney and Nor. Sydney | | New York and Boston * | | Monthly Totals | |
|-------------------------------------|--------|----------|---------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|------------------------|----------|-----------------------|----------|----------------|----------|
| | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. |
| April..... | 9,896 | 280 | 115,366 | 159 | 7,077 | 93 | 4 | 591 | 270 | 591 | 72 | 107 | 124 | ..... | 128 | 50 | 32,937 | 1,250 |
| May..... | 15,704 | 983 | 3,195 | 97 | 20 | 7 | 54 | 107 | 107 | 529 | 88 | 184 | 98 | ..... | 23 | 7 | 21,349 | 1,822 |
| June..... | 11,986 | 1,128 | 2,890 | 59 | 17 | 32 | 81 | 129 | 4 | 274 | 66 | 98 | 91 | 12 | 12 | 12 | 15,273 | 1,619 |
| July..... | 7,775 | 1,839 | 1,924 | 111 | 14 | 48 | 69 | 21 | 134 | 356 | 25 | 96 | 55 | 20 | 208 | 4 | 10,204 | 2,485 |
| August..... | 5,628 | 1,447 | 1,622 | 42 | 16 | 22 | 26 | 2 | 76 | 184 | 38 | 41 | 93 | 30 | 147 | 1 | 7,646 | 1,769 |
| September..... | 5,257 | 925 | 1,178 | 24 | 8 | 18 | 24 | 9 | 84 | 86 | 30 | 31 | 108 | ..... | 117 | ..... | 6,830 | 1,157 |
| October..... | 5,513 | 733 | 1,190 | 57 | 5 | 19 | 36 | 4 | 127 | 126 | 23 | 21 | 115 | ..... | 149 | 1 | 7,158 | 974 |
| November..... | 2,688 | 322 | 1,024 | 45 | 215 | 23 | 7 | 4 | 64 | 64 | 27 | 13 | 81 | 31 | 97 | ..... | 4,178 | 582 |
| December..... | 18 | ..... | 1,745 | 94 | 1,047 | 76 | 2 | ..... | 68 | 40 | 20 | 22 | 41 | 26 | 383 | ..... | 3,297 | 202 |
| January..... | 1 | ..... | 1,337 | 110 | 965 | 85 | 6 | ..... | 47 | 32 | 27 | 21 | ..... | ..... | 76 | ..... | 2,478 | 270 |
| February..... | 6 | ..... | 1,535 | 112 | 1,094 | 96 | ..... | 58 | 39 | 11 | 14 | 13 | ..... | ..... | 138 | 6 | 2,855 | 267 |
| March..... | 5 | ..... | 8,161 | 149 | 3,731 | 110 | ..... | 506 | 335 | 52 | 69 | 42 | ..... | ..... | 85 | 1 | 12,282 | 664 |
| Totals by Ports— Immigrants..... | 64,507 | ..... | 43,165 | ..... | 14,205 | ..... | 309 | ..... | 1,400 | ..... | 484 | ..... | 853 | ..... | 1,563 | ..... | 126,486 | ..... |
| Non-Immigrants..... | 7,657 | ..... | 1,103 | ..... | 629 | ..... | 53 | ..... | 2,695 | ..... | 723 | ..... | 158 | ..... | 83 | ..... | 13,101 | ..... |

* At ports of New York and Boston, immigrants en route to Canada are medically inspected by officers of the United States Public Health Service.

(b) MEDICAL INSPECTIONS—COMPARATIVE STATEMENT

| Fiscal Year | Quebec | | Halifax | | St. John | | Montreal | | Vancouver | | Victoria | | Sydney and North Sydney | | New York and Boston | | Totals | |
|---------------|--------|----------|---------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-------------------------|----------|---------------------|----------|---------|----------|
| | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. | Imm. | Non-Imm. |
| 1926-27..... | 63,924 | 6,867 | 37,998 | 970 | 16,930 | 808 | 313 | 82 | 1,248 | 2,150 | 522 | 719 | 828 | 164 | 1,513 | 916 | 133,216 | 12,707 |
| 1927-28..... | 64,507 | 7,657 | 43,165 | 1,103 | 14,205 | 629 | 309 | 53 | 1,400 | 2,695 | 484 | 723 | 853 | 158 | 1,563 | 83 | 136,486 | 13,101 |
| Increase..... | 583 | 790 | 5,227 | 133 | 2,275 | 179 | 4 | ..... | 152 | 515 | ..... | 4 | 25 | ..... | 50 | ..... | 3,270 | 394 |
| Decrease..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 38 | ..... | ..... | 6 | ..... | 833 | ..... | ..... |

The following table shows the number of persons medically certified at ports of arrival as prohibited of entry to Canada under the Immigration Act:—

| Ocean Ports | Insane, feeble-minded epileptic, etc. | Tuberculosis, loathsome or chronic infectious disease | Physically defective—liable to become a public charge | Constitutional psychopathic inferiority | Minor physical or mental defects— affecting ability to earn a living | Total |
|------------------|---------------------------------------|---|---|---|--|-------|
| | Section 3 (a) | Section 3 (b) | Section 3 (c) | Section 3 (k) | Section 3 (m) | |
| Quebec..... | 28 | 11 | 488 | 10 | 31 | 568 |
| Halifax..... | 7 | 7 | 115 | 2 | 5 | 136 |
| St. John..... | | 4 | 68 | | | 72 |
| Montreal..... | 2 | 2 | 2 | | | 6 |
| Vancouver..... | 3 | | 3 | | 1 | 7 |
| Victoria..... | | 1 | 1 | | 1 | 3 |
| North Sydney.... | | 1 | 7 | | | 8 |
| Totals..... | 40 | 26 | 684 | 12 | 38 | 800 |

Tables below show, by ports, the specific mental and physical conditions for which the above persons were medically certified:—

IMMIGRATION ACT, SECTION 3 (a) AND (k)—PERSONS MENTALLY DEFECTIVE

| Disability | Quebec | Halifax | Montreal | Vancouver | Totals |
|---|--------|---------|----------|-----------|--------|
| Section 3 (a)— | | | | | |
| Epilepsy..... | 4 | | | 1 | 5 |
| Feeble-minded..... | 8 | 5 | | 1 | 14 |
| Imbecility..... | 1 | | | | 1 |
| Insanity..... | 15 | 2 | 2 | 1 | 20 |
| Section 3 (k)— | | | | | |
| Constitutional psychopathic inferiority | 10 | 2 | | | 12 |
| Totals..... | 38 | 9 | 2 | 3 | 52 |

IMMIGRATION ACT, SECTION 3 (b)—PERSONS WITH TUBERCULOSIS, LOATHSOME OR CONTAGIOUS DISEASE

| Disease | Quebec | Halifax | St. John | Montreal | Victoria | North Sydney | Totals |
|---------------------|--------|---------|----------|----------|----------|--------------|--------|
| Carcinoma..... | | | | | | 1 | 1 |
| Gonorrhœa..... | 3 | 2 | | 1 | | | 6 |
| Ringworm..... | 1 | | | | | | 1 |
| Sycosis barbae..... | | 1 | | | | | 1 |
| Syphilis..... | 2 | | | 1 | | | 3 |
| Trachoma..... | 2 | 3 | 4 | | | | 9 |
| Tuberculosis..... | 3 | 1 | | | 1 | | 5 |
| Totals..... | 11 | 7 | 4 | 2 | 1 | 1 | 26 |

IMMIGRATION ACT, SECTION 3 (c) AND (m)—PERSONS PHYSICALLY DEFECTIVE

| Defects | Quebec | Halifax | St. John | Montreal | North Sydney | Vancouver | Victoria | Totals |
|----------------------------------|--------|---------|----------|----------|--------------|-----------|----------|--------|
| Absence of members..... | 28 | 6 | 10 | | | | | 44 |
| Anemia..... | | 1 | | | 1 | | | 2 |
| Blindness, partial or total..... | 6 | | 1 | | 1 | | | 8 |
| Blood vessels, defects of..... | 40 | 3 | | | | | | 43 |
| Bones, diseases of..... | 2 | | | | | | | 2 |
| Chest conditions..... | 6 | | | | | | | 6 |
| Corpulence..... | | | | | | 1 | | 1 |
| Deaf and dumb..... | 3 | 1 | | | | | | 4 |
| Deafness, partial or total..... | 34 | 5 | 7 | | 1 | | | 47 |
| Debility..... | | 4 | | | | | | 4 |
| Deformities..... | 101 | 21 | 7 | 1 | 4 | 1 | | 135 |
| Dermatitis..... | 2 | | | | | | | 2 |
| Depressed skull..... | | | 1 | | | | | 1 |
| Diabetes..... | 2 | | | | | | | 2 |
| Dwarf..... | | | 1 | | | | | 1 |
| Ear, diseases of..... | 2 | | | | | | | 2 |
| Epileptiform seizures..... | 1 | | | | | | | 1 |
| Encephalitis lethargica..... | | | 1 | | | | | 1 |
| Glandular conditions..... | 2 | | | | | 1 | | 3 |
| Goitre..... | 66 | 11 | 7 | | | | | 84 |
| Gun shot wounds..... | | 1 | | | | | | 1 |
| Heart conditions..... | 41 | 11 | 4 | | | 1 | | 57 |
| Hernia..... | 26 | 7 | 1 | | | | | 34 |
| Hydrocele..... | | 1 | 1 | | | | | 2 |
| Infantilism..... | 2 | | | | | | | 2 |
| Joints, diseases of..... | | 1 | | | | | | 1 |
| Loss of power of members..... | 34 | 14 | 4 | 1 | | | | 53 |
| Malaria, recurring..... | 2 | 1 | 1 | | | | | 4 |
| Malnutrition..... | | 1 | | | | | | 1 |
| Myxoedema..... | 1 | | | | | | | 1 |
| Nephritis..... | 3 | | | | | | | 3 |
| Nervous debility..... | | 1 | | | | | | 1 |
| Neurasthenia..... | 7 | | | | | | | 7 |
| New growths..... | 1 | | | | | | | 1 |
| Paralysis..... | 2 | | 2 | | | | | 4 |
| Poor physique..... | 6 | 4 | 2 | | | | | 12 |
| Pregnancy, illegitimate..... | 2 | 1 | | | | | | 3 |
| Rheumatism..... | 8 | | 1 | | | | | 9 |
| Senility..... | 2 | 13 | 1 | | | | 1 | 17 |
| Speech, defects of..... | 21 | 1 | 2 | | | | | 24 |
| Varicose veins..... | | | 2 | | | | | 2 |
| Vision, defective..... | 66 | 10 | 12 | | | | | 88 |
| Totals..... | 519 | 119 | 68 | 2 | 7 | 4 | 1 | 720 |

The following table has reference to ocean passengers (immigrant and non-immigrant) who, on arrival at the Canadian ports named, were detained for medical or surgical treatment until they were cured or fit to travel. The list includes those persons detained at the Savard Park Immigration Hospital, Quebec, and the Rockhead Immigration Hospital, Halifax, on account of minor infectious diseases.

| Treated for | Quebec | Halifax | St. John | Montreal | Vancouver | Totals |
|--------------------------|--------|---------|----------|----------|-----------|--------|
| Abortion..... | 1 | | | | | 1 |
| Abscess..... | 9 | 8 | | | | 17 |
| Acme..... | | 1 | | | | 1 |
| Adenitis..... | | 2 | | | | 2 |
| Appendicitis..... | 1 | 3 | | | | 4 |
| Asthma..... | | 1 | | | | 1 |
| Boils..... | 4 | 4 | | | | 8 |
| Bronchitis..... | 11 | 9 | | | | 20 |
| Burns..... | 3 | | 1 | | | 4 |
| Carbuncles..... | 2 | 3 | | | | 5 |
| Cardial hypertrophy..... | | 1 | | | | 1 |
| Cartilage displaced..... | | 1 | | | | 1 |
| Catarrhal jaundice..... | 1 | | | | | 1 |

| Treated for | Quebec | Halifax | St. John | Montreal | Vancouver | Totals |
|----------------------------|--------|---------|----------|----------|-----------|--------|
| Cellulitis..... | 1 | 2 | | | | 3 |
| Cervical fistula..... | 1 | | | | | 1 |
| Chancroid..... | 1 | | | | | 1 |
| Chickenpox..... | 7 | 3 | | | | 10 |
| Childbirth..... | 2 | 4 | 3 | | | 9 |
| Cholera infantum..... | | 1 | | | | 1 |
| Cholecystitis..... | 1 | | | | | 1 |
| Colds, acute..... | 13 | | | | | 13 |
| Colitis..... | 1 | | | | | 1 |
| Conjunctivitis..... | 15 | 14 | | | 2 | 31 |
| Constipation..... | 2 | | | | | 2 |
| Contusions..... | | 3 | | | | 3 |
| Coryza..... | 1 | | | | | 1 |
| Cystitis..... | 1 | | 1 | | | 2 |
| Debility..... | 4 | | | | | 4 |
| Dermatitis..... | 3 | | | | | 3 |
| Eclampsia..... | | 1 | | | | 1 |
| Eczema..... | 2 | 3 | 1 | | | 6 |
| Endometritis..... | | 1 | | | | 1 |
| Enteritis..... | 1* | 1 | | | | 2 |
| Erysipelas..... | | 1 | | | | 1 |
| Epididymitis..... | | | 1 | | | 1 |
| Folliculitis..... | | | | | | 2 |
| Food rash..... | 2 | | | | | 1 |
| Fractures..... | 3 | 1 | 1 | | | 5 |
| Gastritis..... | 2 | | | | | 2 |
| Gastro-enteritis..... | 3 | | | | | 3 |
| German measles..... | 2 | | | | | 2 |
| Goitre..... | | | 1 | | | 2 |
| Heart disease..... | | 2* | | | | 2 |
| Hematoma..... | | 1 | | | | 1 |
| Herpes..... | 1 | | | | | 1 |
| Hypertrophy of thymus..... | 1* | | | | | 1 |
| Impetigo..... | 14 | 5 | | | | 19 |
| Indigestion, acute..... | 2 | 2 | | | | 4 |
| Infected members..... | 6 | | | | | 6 |
| Influenza..... | 5 | 2 | | | | 7 |
| Laryngitis..... | 2 | | | | | 2 |
| Marasmus..... | 1 | | | | | 1 |
| Mastitis..... | 1 | | | | | 1 |
| Mastoiditis..... | 1 | | | | | 1 |
| Measles..... | 51 | 27 | | | | 78 |
| Mumps..... | 6 | 3 | | | | 9 |
| Myocarditis..... | 2 | | | 1 | | 3 |
| Otitis media..... | 2 | | | | | 2 |
| Otorrhoea..... | | | 1 | | | 1 |
| Para-typhoid..... | | 1 | | | | 1 |
| Pleurisy..... | 2 | | | 1 | | 3 |
| Pneumonia..... | 5† | 13† | | | 1* | 19 |
| Psoriasis..... | | 1 | | | | 1 |
| Pulmonary congestion..... | 1 | | | | | 1 |
| Pyrexia..... | | | 2 | | | 2 |
| Quinsy..... | 1 | 1 | 1 | | | 2 |
| Ringworm..... | 1 | 5 | 1 | | | 7 |
| Scabies..... | 2 | 1 | 1 | | | 4 |
| Scalds..... | 1 | | | | | 1 |
| Scarlet fever..... | 7 | 4 | | | | 11 |
| Seasickness..... | | 1 | 4 | | | 5 |
| Seborrhoea capitis..... | 2 | | | | | 2 |
| Septic wounds..... | 7 | 13 | 3 | | | 23 |
| Sprains..... | 10 | | | | | 10 |
| Synovitis..... | 3 | | | | | 3 |
| Tonsillitis..... | 13 | 7 | | | | 20 |
| Trachoma, cicatrized..... | 2 | | | | | 2 |
| Ulcerations..... | 1 | | 1 | | | 2 |
| Uremia..... | 1 | | | | | 1 |
| Urticaria..... | 1 | | | | | 1 |
| Vaccina..... | 1 | | | | | 1 |
| Wounds..... | 7 | | 1 | | | 8 |
| Totals..... | 263 | 158 | 24 | 2 | 3 | 450 |

*1 died during detention. †2 died during detention.

Of the immigrant and non-immigrant ocean passengers who, on account of apparent mental or physical defects, were detained for secondary examination the following were either (a) released as not coming within the "prohibited

classes" referred to in Section 3 of the Immigration Act, or (b) entered on record cards as having minor defects only. The enumeration includes those persons held at Quebec and Halifax as contacts of minor infectious disease cases.

(a) PERSONS DETAINED FOR MEDICAL OBSERVATION, BUT SUBSEQUENTLY RELEASED AS "NEGATIVE"

| Reason for Detention | Quebec | Halifax | St. John |
|-----------------------------|--------|---------|----------|
| Observation, chest..... | 2 | | |
| " chickenpox..... | 3 | 3 | |
| " epilepsy..... | 1 | | |
| " eyes..... | 1 | 5 | |
| " general..... | 38 | 13 | 20 |
| " genito urinary..... | 2 | | |
| " heart..... | | | 2 |
| " measles..... | 17 | 20 | |
| " mental..... | 9 | | |
| " mumps..... | | 3 | |
| " nails..... | 1 | 1 | 1 |
| " petit mal..... | 1 | | |
| " pyrexia..... | 5 | | 1 |
| " rash..... | 5 | | |
| " refusing vaccination..... | 3 | | |
| " scalp..... | 2 | | |
| " scarlet fever..... | 11 | 5 | |
| " skin..... | | 1 | |
| " throat..... | 6 | | |
| Totals..... | 107 | 51 | 24 |

(b) CASES RECORDED FOR MINOR DEFECTS

| | |
|--------------|-----|
| Quebec..... | 550 |
| Halifax..... | 145 |
| Total..... | 695 |

MONTREAL

During the fiscal year a total of 742 persons who were being deported on account of becoming public charges, due to mental or physical defects, were examined by medical officers of the department at the port of Montreal.

QUEBEC

The following additional activities were carried out by the medical staff of the department at the port of Quebec:—

LABORATORY EXAMINATIONS

| | | |
|---|-----|----------------|
| <i>Blood—</i> | | |
| Culture..... | 2 | |
| Counting of R.C..... | 6 | |
| Estimation of hemoglobin..... | 1 | |
| Malaria..... | 1 | |
| Wassermann..... | 6 | (At V.D. Lab.) |
| Widal..... | 1 | |
| Weil-Felix..... | 3 | |
| <i>Feces—</i> | | |
| Koch bacillus..... | 9 | |
| Occult blood..... | 2 | |
| Ova..... | 1 | |
| <i>Pus—</i> | | |
| Glandular abscess..... | 1 | |
| Veneral and other sores..... | 9 | |
| <i>Secretions—</i> | | |
| Nose and throat..... | 18 | |
| Skin and appendages..... | 16 | |
| Sputum..... | 32 | |
| <i>Urine—</i> | | |
| Chemical..... | 143 | |
| Microscopic..... | 47 | |
| <i>W ater—</i> | | |
| Bacteriological examination of specimens from Father Point..... | 3 | |
| Bacteriological examination of specimens from Grosse Isle..... | 5 | |
| Total..... | 306 | |

EXAMINATIONS IN X-RAY DEPARTMENTS

| | |
|-------------|----|
| Chest..... | 26 |
| Limbs..... | 10 |
| Total | 36 |

MISCELLANEOUS

| | |
|---|----|
| Evidence by members of medical staff before Immigration Department boards of inquiry..... | 67 |
| Examinations of civil servants..... | 7 |
| “ “ pilots..... | 14 |
| Visits to city hospitals..... | 12 |
| “ civil detention..... | 20 |
| “ jail..... | 3 |

IMMIGRATION MEDICAL SERVICE OVERSEAS

On February 15, 1928, it became compulsory for all prospective emigrants to Canada from European countries, including the British Isles, to undergo medical examination before being permitted to enter this country. Prior to that date, while all immigrants were subject to medical line inspection on arrival at Canadian ports, compulsory medical examination before embarkation applied only to those emigrating under Government assisted passages, to unaccompanied women, and to juvenile immigration schemes. While the new policy did not come into complete operation until the date above-named, prospective emigrants were given the option of being examined by the augmented staff of Canadian medical officers sent overseas as early as November, 1927.

Under the old scheme, British and Continental doctors selected from an official roster were utilized to conduct the examinations. Their medical certificates were then reviewed by the London office of the Canadian Immigration Medical Service. Where doubt existed as to their actual condition, a personal examination was made by the Canadian medical officer in charge, or by his assistant.

The following statements summarize the various activities:—

ROSTER DOCTORS' CERTIFICATES REVIEWED

| | | | |
|-------------|-------|----------------|--------|
| April..... | 4,967 | September..... | 1,726 |
| May..... | 5,187 | October..... | 1,043 |
| June..... | 3,548 | November..... | 561 |
| July..... | 2,819 | | |
| August..... | 2,298 | Total..... | 22,149 |

EXAMINATIONS BY CANADIAN MEDICAL OFFICERS

| | | | |
|----------------|-----|---------------|--------|
| April..... | 235 | November..... | 839 |
| May..... | 267 | December..... | 1,966 |
| June..... | 296 | January..... | 5,066 |
| July..... | 206 | February..... | 11,750 |
| August..... | 168 | March..... | 21,765 |
| September..... | 98 | | |
| October..... | 89 | Total..... | 42,745 |

Of those examined, the following were found to come within the “prohibited classes” under the Immigration Act:—

MENTAL CONDITIONS

| | |
|--|------|
| Section 3 (a)— | |
| Dementia praecox..... | 10 |
| Epilepsy..... | “ |
| Feeble-minded.. | “ |
| Idiocy..... | 6 |
| Imbecility..... | “ |
| Maniac depression..... | 1 |
| Melancholia..... | 1 |
| Mentally deranged..... | 2 |
| Previously insane..... | 18 |
| Section 3 (k)— | |
| Constitutional psychopathic inferiority..... | 145 |
| Total..... | *431 |

*Of this number, 305 were thus certified under the new scheme by Canadian medical officers, during the period November, 1927, to March, 1928, inclusive.

TUBERCULOSIS, LOATHSOME OR CONTAGIOUS DISEASE

| | | |
|---------------------------------|-----|------|
| Section 3 (b)— | | |
| Acne vulgaris..... | 1 | |
| Eczema..... | 4 | |
| Favus..... | 8 | |
| Herpes..... | 1 | |
| Ichthyosis..... | 4 | |
| Impetigo..... | 2 | |
| Psoriasis..... | 4 | |
| Ringworm..... | 14 | |
| Scabies..... | 13 | |
| Sycosis barbae..... | 5 | |
| Trachoma..... | 307 | |
| Tuberculosis—adenitis..... | 13 | |
| lupus..... | 11 | |
| nephritis..... | 1 | |
| pulmonary..... | 49 | |
| surgical..... | 15 | |
| Venereal disease—chancroid..... | 2 | |
| gonorrhoea..... | 14 | |
| syphilis..... | 16 | |
| Warts, multiple..... | 1 | |
| Total..... | | *485 |

*Of this number, 377 were thus certified under the new scheme by Canadian medical officers, during the period November, 1927, to March, 1928, inclusive.

GENERAL PHYSICAL DISEASES AND DEFECTS

| | | |
|--------------------------------|-----|--------|
| Section 3 (c)— | | |
| Absence of members..... | 105 | |
| Amenorrhoea..... | 1 | |
| Anaemia..... | 34 | |
| Blindness..... | 6 | |
| Blood vessels, defects of..... | 132 | |
| Bones, diseases of..... | 11 | |
| Cataracts..... | 2 | |
| Chest conditions..... | 141 | |
| Chorea..... | 5 | |
| Deafness..... | 185 | |
| Deaf and dumb..... | 6 | |
| Debility..... | 86 | |
| Deformities..... | 356 | |
| Dermatitis..... | 62 | |
| Diabetes..... | 4 | |
| Dumb..... | 3 | |
| Ear, diseases of..... | 41 | |
| Enuresis..... | 4 | |
| Glands..... | 14 | |
| Goitre..... | 70 | |
| Heart conditions..... | 508 | |
| Hernia..... | 128 | |
| Hydrocele..... | 1 | |
| Iritis..... | 2 | |
| Joints, diseases of..... | 26 | |
| Loss of power of members..... | 69 | |
| Malaria..... | 15 | |
| Section 3 (c)— | | |
| Nephritis..... | 19 | |
| Neurasthenia..... | 85 | |
| New growths..... | 7 | |
| Ovarian cyst..... | 1 | |
| Poor physique..... | 261 | |
| Pregnancy..... | 7 | |
| Rheumatism..... | 27 | |
| Senility..... | 31 | |
| Speech, defects of..... | 45 | |
| Vision, defects of..... | 350 | |
| Total..... | | *2,850 |

* Of this number, 1,785 were thus certified under the new scheme by Canadian medical officers, during the period November, 1927, to March, 1928, inclusive.

CHRONIC ALCOHOLISM

| | |
|--------------------|---|
| Section 3 (1)..... | 3 |
|--------------------|---|

MINOR MENTAL OR PHYSICAL DEFECTS

Section 3 (m)—

| | |
|-----------------------|-------|
| Mental defects..... | 12 |
| Physical defects..... | 901 |
| Total..... | * 913 |

Whereas it is the task of officers of the Immigration Medical Service overseas to diagnose the mental and physical condition of prospective emigrants to Canada, and to assess their medical rating under section 3 of the Immigration Act, the final responsibility as to their acceptance or rejection rests with the Department of Immigration.

Before the close of the fiscal year, in order to carry out the new policy, medical examination centres in charge of Canadian doctors were established in the British Isles and Europe as follows:—

| | |
|-----------------------|--------------------|
| Great Britain—London. | Ireland—Belfast. |
| Bristol. | Londonderry. |
| Birmingham. | France—Paris. |
| Liverpool. | Belgium—Antwerp. |
| York. | Holland—Rotterdam. |
| Glasgow. | Germany—Hamburg. |
| Inverness. | Poland—Danzig. |
| | Latvia—Riga. |

LABORATORY OF HYGIENE

During the year the activities of the laboratory were varied. Following upon the publication by Dr. Glover of New York of the formula of his "Cancer Medium," whereby he claimed cultures of the specific microbe of cancer could be isolated, attempts were made to corroborate his claims. Following carefully Dr. Glover's technique, cancerous tissue from three cases of the disease were closely investigated and in no instance could Glover's claims be substantiated. The results attained were quite in conformity with those published by Kolmer of the Dermatological Institute of Philadelphia.

As in the past, close collaboration was maintained with the Food and Drugs Laboratory and with the Chief Sanitary Engineer of the department, whereby bacteriological examinations of various kinds of foods, and water samples from various vessels plying on the Great Lakes were duly examined.

At the request of the expert retained by the Provincial Board of Health of Quebec investigating the typhoid outbreak in Montreal, the laboratory took part in certain critical investigations with satisfactory results.

Supplies of both plague and Asiatic cholera vaccines have been purchased and supplied to the quarantine medical officers of the various stations controlled by the department.

A case of suspected plague on board a ship entering the port of Halifax from Calcutta, India, was made the subject of close inquiry. Laboratory tests, carried out under the supervision of the chief of this division, ultimately showed that the incident was not due to plague, but to another type of infection harmless to the general public.

About the close of the year investigations were begun in reference to the presence of Malta fever in Ottawa and vicinity, which indicated the presence of this type of infection. The work is being carried on with the anticipation that publication of the research will be accomplished in the course of the coming year.

* Of this number, 548 were thus certified under the new scheme by Canadian Medical officers, during the period November, 1927, to March, 1928, inclusive.

In the laboratory an incubator room was built with the collaboration of the supervising architect of the department, as an experiment to try out new systems of insulation. The experiment has proved to be quite a success and will be made the subject of a publication at a later date.

Upon invitation from the authorities of the United States Department of Agriculture, Bureau of Food and Drugs, the laboratory collaborated in an investigation of the biological assay of digitalis, according to the United States Pharmacopoeia method, and was brought to a satisfactory conclusion. A new method in interpreting the facts of the biological assay of digitalis by means of probability curves was undertaken, but as yet is not concluded. It would appear, however, that by this method more concise results of analyses will be attained. Should this be so, the method will be published in one or other of the scientific journals later on.

In anticipation, during the forthcoming year, of the application of the new regulations as applied to the Food and Drugs Act of 1927, work is under way in the laboratory for the manufacture of standard preparations of digitalis, strophanthus, ergot and pituitary extract. These standards are to be made available to all Canadian manufacturers of these pharmacopoeial preparations.

DIVISION OF VENEREAL DISEASE CONTROL

The work of venereal disease control was carried on, as in preceding years, with the aid of the Dominion grant, which has been allocated to the provinces for the past nine years. The grant this year was distributed as follows:—

| | |
|------------------------------|--------------------|
| Alberta..... | \$ 6,504 21 |
| Ontario..... | 32,425 93 |
| Nova Scotia..... | 5,790 00 |
| Saskatchewan..... | 8,372 80 |
| Manitoba..... | 6,743 67 |
| New Brunswick..... | 4,287 22 |
| British Columbia..... | 5,798 23 |
| Quebec..... | 26,098 47 |
| Printing and stationery..... | 2,837 58 |
| Total..... | <u>\$98,858 11</u> |

While it has been considered advisable to decrease the amount of the grant, in view of the fact that the period of organization is over, a period when expenditure by the provinces was at its height, the need for a continuance of the work is only too evident. In spite of the fact that a campaign of an intensive nature has been carried on during the past nine years, there is no dearth in the number of cases being treated at the clinics. In this regard, it is important to remember that, in the majority of cases, syphilis requires approximately three years of treatment before the question of cure may be entertained, and in some cases, in view of the fact that the Wassermann reaction is continuously positive in spite of treatment, a longer period may be necessary. Prolonged treatment makes for an accumulation of cases, so that the clinics are well filled with patients at all times. This is particularly true of the large cities.

The treatment of gonorrhoea, in spite of popular opinion, is usually prolonged before cure can be definitely established. In the case of complications, such for example as chronic prostatitis, the patient may return year after year for treatment.

The total number of new cases of venereal diseases admitted for treatment for the calendar year 1927 was, approximately, as follows:—

| | Treated in Clinics and Institutions | Reported by Physicians | Total |
|--|---|------------------------------|---------|
| Syphilis..... | 7,262 | 4,022 | 11,284 |
| Gonorrhoea..... | 9,495 | 7,186 | 16,681 |
| Chaneroid..... | 281 | 75 | 356 |
| | 17,038 | 11,283 | 28,321 |
| Total number of treatments administered..... | | | 493,016 |
| Total number of laboratory examinations..... | | | 74,605 |

The number of male cases under treatment outnumbers the female, although in recent years there is an increase in the number of female patients. This increase is due to the large number of females who are leaving the protective atmosphere of the home and entering industrial life, as well as the opportunities afforded by the automobile. It is found in our cities, as in those of other countries, that houses of prostitution have diminished in numbers and that the motor car is taking their place. Late marriages are, no doubt, a concomitant factor.

Patients in our clinics, while composed in the main of the labouring class, are representative of all and comprise all age groups, although the greatest prevalence is between the ages of nineteen and twenty-five years. Many of the female patients are quite young; some of them of school age.

An important factor that contributes to promiscuity is uncongenial surroundings. Boarding-houses, for example, are dreary places at best, and companionship is sought in public places such as the streets and public parks. This contributes to the sum total of venereal disease.

The cost of treatment at the hands of a private physician is prohibitive for most. The earning capacity of the average young man or woman between the ages of nineteen and twenty-five is small and quite inadequate to meet the cost of treatment, so that the necessity of continuing free treatment is self-evident. If free treatment is not available, it is neglected, and the end result is injurious to the individual and to society.

It is found that a large percentage of those suffering from syphilis do not continue treatment until a cure has been established; in fact, the majority drift away from the clinic and eventually relapse. It is, unfortunately, the remote effects of syphilis that are particularly dangerous. The disease in the later stages attacks the vital organs, such as the heart, arteries and nervous system, and early death or insanity closes the case. It is most often just at the time that a man's responsibilities are at their greatest—between the ages of 40 and 50 years—that these later symptoms, which result in invalidism or death, occur. The diminished earning capacity of the father who is suffering from syphilis lowers the status of the family, so that often it is reduced to living in slum areas which have a demoralizing influence on the children, and these children contribute their quota to delinquency and crime.

The follow-up system that is being carried out with some degree of effectiveness in all of our clinics, together with the educational methods which are part of the duties of the physicians and nurses attached to the clinic, do much to encourage patients to continue treatment until discharged. This is an important feature of the work. An increasing amount of preventive work is being done in pre-natal clinics and maternity hospitals.

Treatment in penal institutions continues to be effectively carried out. In penitentiaries, jails and other penal institutions, all prisoners are given a physical examination and a Wassermann is taken. This is followed by treatment where necessary. Treatment may be enforced after the prisoner is discharged, until such time as it is considered no longer necessary.

The facilities afforded by laboratories in all of the provinces are increasingly in demand. This is due largely to the fact that the younger generation of physicians is fully informed of the importance of a Wassermann and takes advantage of it.

Free treatment continues to be afforded sailors at the several ports, in accordance with an international agreement whereby sailors of all nationalities are to receive free treatment at all world ports.

The campaign of education has been continued. During the year approximately 140,000 pieces of literature were issued. Lectures have been continued as usual.

In European countries statistics would appear to indicate a diminution in syphilis. Although physicians are apathetic towards reporting their cases, their returns as well as those of our clinics would appear to indicate a similar condition in this country. One cannot state as yet whether this is of a permanent nature, but there is no doubt that the intensive campaign of education and provision of free treatment, which have reached such great numbers, cannot but have a beneficial effect. There does not appear to be a corresponding reduction in the prevalence of gonorrhœa, but there is no doubt that the incidence is not so great as it was when the venereal disease campaign was instituted. On the whole, the work of venereal disease prevention and treatment is being carried out efficiently.

DIVISION OF CHILD WELFARE

Co-operation has been maintained and increased throughout the year with the Departments of Immigration and Colonization, Trade and Commerce, External Affairs, Justice, Interior (North West Territories and Yukon Branch), Labour, Indian Affairs and the Dominion Bureau of Statistics as well as with the provincial authorities in child welfare, health and vital statistics.

MATERNAL MORTALITY

The Report of the Maternal Mortality Inquiry which was made at the request of the first Conference on Medical Services in Canada on December 20, 1924, was completed on October 28, 1927, and was published on January 31, 1928, as Publication No. 37 in the National Series of "The Little Blue Books." The number of copies printed was 30,000 and a copy was sent to every legally qualified medical practitioner in Canada and also on request to a large number of nurses, provincial officials, members of voluntary societies, clergymen and others, and were distributed on request.

A number of requests were received for a popular edition of the report. These requests came chiefly from clergymen, service clubs, nationally organized associations of women and from the general public. It was not found possible to draft one publication which would be suitable for general distribution and this difficulty was met by the preparation of publications 38 and 39 entitled, respectively, "Mother—A little Book for Women" and "Mother—A little Book for Men," each of which contained a summary of the results of the Inquiry. These publications were received from the Government Printing Bureau on February 9, 1928.

The importance of maternal mortality and maternal morbidity to the country and the efforts made by the above-mentioned, especially by members of the medical profession, provincial and municipal officials, voluntary asso-

ciations, the clergy and the press, resulted in great attention being directed to this subject. The demand for "The Canadian Mother's Book," both in English and in French, was much increased. Special committees were appointed by various professional and other organizations to study the subject and to bring forward plans to lessen maternal mortality and morbidity.

Attention has been drawn by a medical officer of health to the fact that every mother in his district is supplied with a copy of "The Canadian Mother's Book" either before or immediately after the birth of her child, distribution being made by the public health nurses who visit the homes, and also to the fact that maternal mortality in this district has been reduced to about 4 per 1,000 living births.

HOSPITAL MAP OF CANADA

The Canadian Council on Child Welfare presented a request for the preparation of a map similar to the Hospital Map of Canada, giving special information in regard to medical and surgical care and treatment for disabled children in Canadian hospitals. It was decided that this request should be complied with and that information on this subject should be obtained by the Canadian Council on Child Welfare and transmitted to the department.

In the meantime, the Canadian Medical Association established a Hospital Division and appointed Dr. H. A. Agnew as director, and, at the request of that association, a copy of "The Hospital Map of Canada," along with a few necessary corrections and other information placed on file since this publication was issued, was transmitted to Dr. Agnew. It is intended that a complete handbook of all hospitals and sanitariums in Canada including mental hospitals shall be prepared and that the manuscript shall be submitted to the department by the Canadian Medical Association, Hospital Division.

NATIONAL BABY WEEK COUNCIL

At the request of the National Baby Week Council, co-operation has been given as before in informing the provincial authorities of the conditions for the Imperial Baby Week Challenge Shield Competition. The competition this year was for the best local "Baby Week Campaign." Entries were received by the council from India, Newfoundland, Ceylon, the Irish Free State and Canada. The shield was awarded to Bellary municipality in Madras and a certificate of merit was awarded to the Calgary Council on Child Welfare, Calgary, Alta.

CHILD WELFARE WORK FOR CHILDREN NOT IN THEIR OWN HOMES

A publication has been prepared and will be issued immediately on "Child Welfare Work and Workers for Children not in their Own Homes." It contains a statement of the modern principles of child welfare as approved by the provincial superintendents in this work and also a directory of the Government officials and voluntary organizations concerned.

CHILDREN NEEDING SPECIAL CARE

Progress has been made during the year in the care, treatment and education of children needing special care. This work has been done under the auspices of the Red Cross, the Rotary Club, the Canadian Council on Child Welfare and others.

A special ward for disabled children was opened in October, 1927, in the Brantford General Hospital. It is known as the "Edgar Allen Ward," being named after the President of the International Association for Crippled Children. The Ontario Association (Rotary) with the co-operation of the Ontario Gov-

ernment has appointed an executive secretary. Public school classes for disabled children in several cities have met with gratifying success and are much appreciated. Transportation facilities for these pupils in Toronto, Ottawa and elsewhere are excellent.

Vocational schools for children to whom manual training is of fundamental importance on account of their backwardness in academic subjects have made marked progress during the year in Ontario and other provinces.

OUTPOST HOMES

Correspondence courses established by the Departments of Education in Ontario and Manitoba have helped to educate children whose homes are so far from school that they are unable to attend classes. The "School Cars" continue to discharge an important duty in northern Ontario. Co-operation with inspectors and teachers engaged in this work has been maintained throughout the year.

PUBLICATIONS

THE LITTLE BLUE BOOKS

"The Canadian Mother's Book".—The Confederation Diamond Jubilee edition of *"The Canadian Mother's Book"* was published on September 1, 1927.

A supply of the "Card for The Baby's Mother" along with a letter *re* the method of distribution of these cards was sent as usual to all registrars, deputy registrars and sub-deputy registrars of vital statistics at the beginning of the official year.

A deputation of Ukrainians waited on the Red Cross authorities in June to renew their request that *"The Canadian Mother's Book"* should be translated into Ukrainian.

Requests for *"The Little Blue Books"* were received from Australia, New Zealand, the Dominion of South Africa, Kenya, the Gold Coast Colony, Kumasi, Madras, British Honduras and other parts of the British Empire, also from Reims in France, Lausanne in Switzerland, from Siberia and from Kameido, Koyko-Fuka, Japan.

The National Series

No. 37. Maternal Mortality in Canada.

No. 38. Mother. A Little Book for Women.

No. 39. Mother. A Little Book for Men.

No. 40. Child Welfare Work and Workers in Canada for Children Not in Their Own Homes.

This series was published during the year and some thousands have been distributed on request.

DIVISION OF HOSPITALIZATION AND SANITATION

HOSPITALIZATION

Tuberculosis Sanitoria

The persistent interest evinced by the medical profession, health authorities, sociologists and welfare workers indicates a marked desire to improve existing conditions, by adopting the principle and practice of modern hospital planning for the care of those suffering from tuberculosis.

The Maritime Provinces, as also other provinces, desired to have the chief of the division visit various centres for the purpose of overlooking the situation concerning this phase of hospitalization. Many centres were visited, including Amherst, Truro, New Glasgow, Antigonish, Pictou, Sydney, Glace Bay, New

Waterford, North Sydney, Bridgewater, Middleton and Kentville, all of Nova Scotia, Charlottetown and Summerside of Prince Edward Island and Ste. Agathe, P.Q.

In most of these places, suitable sites for the tuberculosis unit planned by the department were decided upon, having due regard to orientation and existing services from the general hospitals. Orientation is one of the chief phases in planning tuberculosis sanatoria, as also general hospitals, since without exception, wherever possible, patients' quarters should have a southern or southwestern exposure.

One of the chief appeals to the public of such a unit as before described is that it overcomes the prejudice based on sentiment, namely, the avoidance of members of the family being removed sometimes hundreds of miles away from home while undergoing treatment.

The lack of knowledge of the fundamentals involved in such hospitalization was evinced by the avid interest exhibited and inspires the department to prepare, in due course, a brochure, with suitable plans and data, covering tuberculosis sanatoria, thereby, in a measure, supplying the want so urgently presented.

The following excerpt, received from the Nova Scotia Tuberculosis Commission, summarizes the reaction of the visits made by the chief of the division, i.e.:—

"In view of the very definite information presented and the thorough manner in which it had been worked out, the tuberculosis unit, adaptable as an annex to the varied conditions of our rural hospitals, made a splendid impression on the communities visited, and the practicability of the scheme was recognized. A great deal of difficulty has been experienced and, in fact, the commission did not seem to be able to get any definite information concerning the character of additions required and the cost. Therefore, with this definite information, we are able to give the different hospital centres a more complete idea of what is required."

In the case of Prince Edward Island, appreciation was expressed through the Chief of Red Cross Services, by stating that the visit was very successful, the officer gaining complete victories at full meetings of the trustees and medical staffs at the various centres, and further, although funds for the moment were lacking, each and every centre was anxious to proceed with the scheme. The department was advised that, as a result of the visit, in a few hours educational work along the lines referred to had been accomplished, which otherwise would have taken years.

The aftermath of the visits has proved interesting, inasmuch as inquiries have been received by the department from various hospitals, city medical officers, and private medical practitioners, some asking for plans for sanatoria of twenty-four and thirty bed capacity, others for sleeping porches in connection with private houses together with specifications and costs of same.

The following letter, received by the department, is typical of the interest being evinced by the medical profession in the housing of tuberculosis patients directly under their charge, namely:—

"I am connected with our Colchester County Anti T. B. League. There is no hospital accommodation for advanced cases in the county and I feel that there is a great need for some means where these cases can be cared for, as well as isolated from their family as much as possible. Then again, there are many patients taking the cure at home, and in many cases they do quite as well as if they were in a sanatorium. Even those cases, however, who go to the sanatorium, either at the expense of an Anti T. B. League, or by private means, do not remain at the sanatorium but for a very few months. They also require some place where they can carry on the treatment at home after their return from the hospital."

Another inquirer from Halifax, N.S., sought information as follows:—

"Could you let us have complete plan and specification of a self-contained sanatorium of cheap construction, of about twenty-four or thirty beds, that is, two wards of twelve or

fifteen beds, one for men and one for women; also provision for nurses' quarters. There are some local hospitals so small and inadequately equipped that the idea of an Annex with a view of getting any auxiliary service from the hospital is out of the question, and a request has already been made by one town for such plan as is now asked for."

The City Medical Officer of Health, Sydney, N.S., requested the department to advise upon the remodelling of the vacated air service buildings at North Sydney, for the purpose of a sanatorium. The existing buildings were inspected, and duly reported upon adversely.

At the request of the President of the Laurentian Sanatorium, Ste. Agathe Des Monts, P.Q., the chief of the division visited this sanatorium, with a view of advising as to the best means of overcoming many undesirable conditions which obtained. Phases were covered such as heating; ventilation; lighting; water supply; suitable fuel; insulation of buildings; laundry; nurses' home; gymnasium; infirmary; lack of sterilization; sanitation in treatment of infectious cases; fire protection; refrigeration; general arrangement of patients' quarters; laboratory; X-Ray accommodation; occupational therapy; pathological building for research work, solarium and recreational facilities.

The department's services were recognized by the president, as follows:—

"We wish to thank your department for the courtesy of your visit and to assure you that the suggestions which have been made will be of tremendous value to our institution."

The President of the Greenfield Memorial Preventorium, Ste. Agathe Des Monts, P.Q., also asked for advice upon insanitary conditions and planning generally. Tersely described, the Directors determined, upon receipt of the report, that this institution should be remodelled on the lines advocated, when funds were available.

GENERAL HOSPITALS

Interest is being sustained in the department's publication No. 34, inquiries being received from all parts of the British Empire, Europe and the United States of America, as also from each and every province of the Dominion.

The division is working in close co-operation with the Canadian Medical Association, in advising upon problems affecting new small community hospitals, and in the words of the secretary of the association, "it is surprising how much such a department as yours seems to be needed, judging by the letters which have been coming in."

The Dominion Council of Health had under advisement a communication from the Deputy Minister of Health and Public Welfare, Manitoba, which letter stated that many requests were being received from rural communities for advice regarding the building of small hospitals, and further, that no definite plans were available which could be submitted to the inquirers on the lines of standardization. As a result there is a tendency to use large unoccupied dwelling-houses, or to build new hospitals subject to the individual peculiarities of local communities. This is felt to be unsatisfactory and, in his opinion, it would be greatly appreciated if the necessary advice could be given. The great need in this province is for the twenty, fifteen and ten-bed hospitals.

Great Britain has become interested in the type of hospitals built in Canada, inasmuch as the office of the High Commissioner of Canada, London, England, asked to have transmitted at the request of the Ministry of Health, Great Britain, information regarding some of the larger hospitals in Canada, the particulars especially desired being general layouts, detailed plans of patient accommodation and section of measurements and heights of the various storeys. Information was furnished by the department through the courtesy of the architects of the following hospitals, i.e., Toronto General Hospital, Ottawa Civic Hospital, Notre Dame Hospital, Montreal, and Royal Victoria Maternity Hospital, Montreal.

Reviewing general hospitals throughout the Dominion, it is to be noted that sterilization is often lacking; operating rooms are planned with southern exposure; sanitation faulty; nurses' homes more elaborate than hospitals, all of which, it is suggested, has been caused by those responsible having visited more ambitious projects, but nevertheless faulty, and applying both faults as well as desirable phases to their own problems; in fact, copying without knowledge of the fundamentals involved.

Ofttimes it has been observed that laundries are so located that soiled linen, which incidentally may be infected, has to be traversed over the same route as that used for clean linen.

Ventilation, in the smaller general hospitals, requires much more consideration than apparently has been given to it, since, in many cases, mechanical ventilation has been installed and discarded after the first month or two of operation, whereas if the gravity system had been installed, such cost would have been avoided, as well as better results obtained.

Food services would appear in many cases to have been looked upon as of secondary importance, which is a great mistake, inasmuch as without a satisfactory food service, cost of maintenance and administration increases in leaps and bounds, and has been proved on more than one occasion to be the cause of hospitals not being self-sustaining.

One of the most serious phases observed is that of the lack of sterilization for dishes, as also no provision made for preparation of diets, and, further, unsuitable materials used for floors and walls, more particularly so in the case of operating rooms, corridors and service departments.

A predominant factor governing most of the rural hospitals is that of cost and, doubtless, many of the errors and faults observed have been caused through lack of funds. However, many such objections could be overcome at a minimum cost and the hospital service throughout the Dominion greatly improved by careful consideration being given to the problem at its inception.

Public health officers, hospital trustees and the medical profession generally are taking advantage of the service of the department in advising upon general hospitals, as is evidenced by a few excerpts given hereunder, namely:—

"Prince Edward Island Hospital, Charlottetown, P.E.I.

"Your officer has been in Charlottetown and has been good enough to go over with us the plans of a proposed new hospital that we have in contemplation. He has given us some very valuable advice and has dictated a schedule of changes and improvements that he would suggest should be made. We are much indebted to him for his kind services in that way."

"Town of New Glasgow, N.S.

"The town of New Glasgow, N.S., has been favoured with two short visits, in the last few weeks, from your officer who specializes in hospital construction.

"On behalf of our citizens I wish to thank you, most sincerely, for your kindness in giving us the benefit of his services.

"While in New Glasgow, he met a number of our leading men, interested in hospital work, and all were highly pleased with his evident ability and pleasing personality."

"Ross Memorial Hospital, Sydney, N.S.

"During your officer's short visit to our hospital last spring, we went over sketches of a proposed new wing to the present building. On submitting these sketches to the architect, Mr. McCormick, he advised us to write you of our proposition.

"It is necessary for various reasons that we have a forty bed hospital, this would mean that the new wing should comprise about five private rooms; men's ward, about six bed; children's ward; nursery; operating room with sterilizing; scrub-up; doctors' dressing room; nurses' work room; X-ray; laboratory; kitchen; nurses', sisters' and maids' dining rooms; a small serving room and bathroom on each floor.

"Thanking you sincerely for any assistance you may give us in making our little hospital meet the requirements stated above."

The appreciation shown for the department's service by the Reverend Sisters, at this hospital, was expressed as follows:—

"We wish to extend our sincere appreciation to you for the work done by the members of your department. The valuable assistance, rendered us by the chief of the division, in regard to the plans of the proposed extension of our hospital, is, we assure you, very much appreciated. We congratulate the department in having for one of its members a person so generous and obliging."

"We have no doubt that when our hospital is completed according to these sketches, and suggestions, that we will have every facility to assist us in caring for the sick."

"Dawson Memorial Hospital Bridgewater N.S."

"We were visited a short time ago by your hospital consulting architect.

"The floor under our operating table needs to be renewed and he suggested the use of a material known as T. M. B. for this purpose.

"Will you be good enough to give us the benefit of your information and experience regarding this material and its suitability for our purpose, and any advice that may suggest itself to you in connection with its application and use.

"Also please let us know where the material can be obtained, and about what it should cost."

"Hamilton Memorial Hospital North Sydney, N.S."

"I am writing on behalf of the management of the Hamilton Memorial Hospital, here, of which I am secretary.

"Starting back as early as last March, we had correspondence with your Hospital Architect, in connection with the building of a new hospital adjoining the one which we now have.

"He has been with us four times since that, giving us advice, and have finally arrived, through his assistance, at a definite plan which we propose going ahead with.

"The reason that I am writing this letter particularly is to thank your department, on behalf of the management for the valuable assistance given us. Your officer has been most thorough in his work and extremely patient, as you can well understand a man dealing with people like the ordinary hospital management would have to be. It certainly was a grand thing for us that we were able to have the assistance of such a man."

"Soldiers Memorial Hospital, Middleton, N.S."

"Blueprints, in regard to the proposed changes in connection with the above hospital are gratefully acknowledged, and will be at once submitted to the hospital commission.

"I thank you personally for your interest in the matter and consider that we were exceedingly fortunate to have such valuable suggestions."

IMMIGRATION AND INFECTIOUS DISEASES HOSPITALS

The new units, as also the remodelled hospitals of the Immigration Medical Service, have attracted the attention of many of the provincial health authorities, as also civic health officers, so much so that requests have been made to the department to advise upon projected schemes for cities, as well as remodelling existing Civic Hospitals.

The Civic Hospital for Infectious Diseases, Quebec, P.Q., is an example, and the way in which the service is recognized is stated in the following excerpt, received from the Director of the Bureau d'Hygiene, Quebec, P.Q., namely:—

"We had the visit of your hospital consulting architect and, together, have visited our Civic Hospital, also that of the Department of Immigration at Parc Savard.

"He has furnished us with a lot of information regarding our hospital, put himself at our disposal for the future and has been kind enough to accept our plans to revise same.

"Let me congratulate you on the way the Immigration Hospital is kept; we have found there much precious information concerning the upkeep of a modern hospital.

"I thank you sincerely for your courtesy in offering us your Architect's services, and am sure that the city will benefit by his advice."

Close co-operation with the Superintendent of Marine Hospital Service resulted in the completion of the Marine Hospital and Infectious Diseases Unit, Sydney, N.S., which remodelling and new construction represents the latest principles, practices and thought on modern hospital planning.

Inter alia, the Provincial Health Officer of Nova Scotia is of opinion that the Infectious Unit is the best of its kind throughout the Dominion.

The Immigration Hospital, Savard Park, Quebec, P.Q., owing to the increased service required for hospitalization of immigrants arriving at the port of Quebec, demanded an additional unit. Plans and data were prepared by the division, and the work is now proceeding. When completed, it is anticipated this hospital will prove a very important instrument of efficiency in the Immigration Medical Services.

Various works and repairs have been dealt with at the quarantine stations throughout the Dominion, in conjunction with the Department of Public Works. These stations to-day are better from a physical point of view (both planning and equipment) than in any previous year of the service.

MENTAL HOSPITALS

Another phase of hospitalization which seems to be gathering impetus is that of hospitals for the feeble-minded. This urge was met by the division preparing a *Compilation of Current Data with Illustrations, Plans, Etc.*, covering the many phases for the care of the feeble-minded, namely, the problem, institutions, colonies, hospitals, training schools, clinics and buildings generally. This compilation has 190 pages, with index, appendix and bibliography, and is profusely illustrated, covering every kind of institution on the American continent. The value of the compilation can be judged by the letters received from members of the Dominion Council of Health, which are given hereunder, namely:—

"University of Toronto, Director School of Hygiene and Connaught Laboratories"

"I have just received to-day the very valuable compilation on mental hygiene, which you have prepared for the members of the Dominion Council of Health. We are very pleased indeed to receive this material. It will be exceedingly useful both to the members of the staff and to students in the various departments in the School of Hygiene in this university. I wish to congratulate you upon the very successful completion of a work of a thoroughly difficult character."

"Department of Public Health, Nova Scotia"

"I have your letter of February 15 and to-day, by express, there was received the compilation of current data dealing with the care of the feeble-minded, which is very valuable."

"Department of Public Health, Alberta"

"I beg to acknowledge with many thanks receipt of the volume compiled by you on mental hygiene. This volume contains much useful information."

"Department of Health, New Brunswick"

"Am in receipt under separate cover of compilation by your hospital consulting architect, respecting 'Mental Hygiene,' for which I am much obliged. It is of interest and value."

"British Ministry of Pensions"

"I wish to express my best thanks to the Deputy Minister of Health for the splendid work which you have sent me.

"I shall read the compilation with every attention and with special appreciation because it deals with the subject in which I have long been interested.

"The Ministry of Pensions has provided institutional care in its own specially designed hospitals for those mental defectives who come under its authority.

"The Mental Deficiency Act of the United Kingdom was passed shortly before the Great War and consequently was neglected in favour of less constructive activities. The implementation of this Act left a lot to be desired when I was last in England two years ago.

"Again recording my very best thanks to the Deputy Minister of Health."

The Board of Governors, Verdun Protestant Hospital, Verdun, P.Q., enlisted the aid of the division in remodelling the various units. Several interviews took

place between the Governors and the chief of the division, culminating in sketch plans being prepared and data furnished which eventuated in the final program being proceeded with to the satisfaction of all those concerned.

HOSPITALS IN ARCTIC

At the request of the Northwest Territories and Yukon Branch, Department of the Interior, plans, specifications, schedule of materials and data were prepared for a hospital and medical officers' residences to be erected in the Arctic Circle. Special attention was given to the insulation of the buildings in view of climatic conditions prevailing in that region. One of the residences is being built this year, and it is the intention to erect others, in due course, in different parts of the Arctic Circle for the housing of the medical officers in charge of the care and treatment of Eskimos.

The Food and Drug Laboratory at Winnipeg has further been developed, plans for which were prepared and data comparable to the requirements of the service.

SANITATION

The publications covering water supplies and sewage treatment prepared by the division are still in great demand, to such an extent that reprints are being made of publication No. 1, covering "Sewage Treatment for Isolated Houses and Small Institutions where Municipal Sewage System is not Available," and publication No. 17, under the caption of "Safe Water Supplies for Isolated Houses and Institutions where Municipal System is not Available."

Publication No. 36, "Pasteurization of Milk for Small Communities," has been translated into French, to meet the demand of the French-speaking people of the Dominion.

The chief of the division, when visiting Prince Edward Island, was asked to report upon a dairy, at the request of the Medical Officer of Health, owing to the fact that such dairy claimed its milk was being pasteurized efficiently, but upon inspection, the plant was condemned, which action was particularly interesting, inasmuch as the plant had been supplying so-called pasteurized milk to one of the hospitals, thereby incurring risks distinctly prejudicial to the health of the people.

Vast correspondence has been received by the department, seeking information on sanitation, having a range of cleaning camp wells, constructing septic tanks, wells in basements, sewage systems, filtering rain water for drinking purposes in schools, rural drainage, and disinfectants, all of which is conclusive evidence of the value of the department's publications.

FINANCIAL STATEMENTS

SUMMARY OF EXPENDITURE BY SERVICES, FOR THE FISCAL YEAR 1927-28

| Service | Gross expenditure | Refunds | Net expenditure |
|---|-------------------|-----------|-----------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Civil Government salaries..... | 172,557 73 | 550 00 | 172,007 73 |
| Civil Government Contingencies..... | 62,243 93 | 2,586 82 | 59,657 11 |
| Food and Drugs..... | 96,368 53 | 1,845 57 | 94,522 96 |
| Opium and Narcotic Drugs..... | 24,753 75 | 786 70 | 23,967 05 |
| Proprietary or Patent Medicines..... | 2,309 91 | ..... | 2,309 91 |
| Laboratory of Hygiene..... | 3,993 51 | 230 01 | 3,763 50 |
| Pollution of Inland Waters..... | 9,083 04 | 296 47 | 8,786 57 |
| Marine Hospitals, etc..... | 193,182 30 | 3,212 50 | 189,969 80 |
| Quarantine..... | 175,350 88 | 1,334 14 | 174,016 74 |
| Leprosy..... | 22,452 38 | 50 50 | 22,401 88 |
| Public Works Health Act..... | 3,545 82 | 103 69 | 3,442 13 |
| Immigration Medical Inspection..... | 150,131 42 | 735 10 | 149,396 32 |
| Veneral Diseases..... | 98,858 11 | ..... | 98,858 11 |
| Gratuities, C.S. Act, 1918, Sec. 30..... | 1,796 66 | ..... | 1,796 66 |
| St. John Ambulance Association..... | 5,000 00 | ..... | 5,000 00 |
| Victorian Order of Nurses..... | 10,000 00 | ..... | 10,000 00 |
| Canadian Council on Child Welfare..... | 5,000 00 | ..... | 5,000 00 |
| Canadian Social Hygiene Council..... | 10,000 00 | ..... | 10,000 00 |
| Canadian Tuberculosis Association..... | 25,000 00 | ..... | 25,000 00 |
| Canadian National Committee for Mental Hygiene..... | 10,000 00 | ..... | 10,000 00 |
| Canadian Dental Hygiene Council..... | 5,000 00 | ..... | 5,000 00 |
| | 1,086,627 97 | 11,731 50 | 1,074,896 47 |

REVENUE COLLECTED FROM VARIOUS SOURCES FOR THE FISCAL YEAR 1927-28

| Service | Total Revenue | Refunds | Net Revenue |
|-----------------------------------|---------------|----------|-------------|
| | \$ cts. | \$ cts. | \$ cts. |
| "A"—Food and Drugs..... | 11,193 55 | 35 00 | 11,158 55 |
| "B"—Opium and Narcotic Drugs..... | 7,078 50 | 115 00 | 6,963 50 |
| "C"—Patent Medicines..... | 7,140 75 | 579 75 | 6,561 00 |
| "D"—Sick Mariners' Duces..... | 223,283 46 | 1,235 38 | 222,048 08 |
| "E"—Casual Revenue..... | 39,063 22 | 19 07 | 39,044 15 |
| | 287,759 48 | 1,984 20 | 285,775 28 |

"A"—FOOD AND DRUGS NET REVENUE FOR 1927-28

| Province | Analysis Fees | Penalties | Costs | Total |
|-----------------------|---------------|-----------|----------|-----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 31 00 | ..... | ..... | 31 00 |
| New Brunswick..... | ..... | 100 00 | 10 00 | 110 00 |
| Quebec..... | 5 00 | 1,685 00 | 440 00 | 2,130 00 |
| Ontario..... | 4,170 00 | 875 00 | 317 30 | 5,362 30 |
| Manitoba..... | 125 00 | 50 00 | 25 00 | 200 00 |
| Saskatchewan..... | ..... | 150 00 | 30 00 | 180 00 |
| Alberta..... | ..... | 775 00 | 280 00 | 1,055 00 |
| British Columbia..... | 15 00 | 1,575 00 | 500 25 | 2,090 25 |
| | 4,346 00 | 5,210 00 | 1,602 55 | 11,158 55 |

DEPARTMENT OF HEALTH

"B"—OPIUM AND NARCOTIC DRUGS NET REVENUE, 1927-28

| | Business Licenses | Export Licenses | Import Licenses | Penalties | Total |
|-----------------------|----------------------|--------------------|--------------------|-----------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 60 00 | | | | 60 00 |
| New Brunswick..... | 80 00 | | | | 80 00 |
| Quebec..... | 1,110 15 | 15 00 | 280 00 | 1,680 00 | 3,085 15 |
| Ontario..... | 1,085 15 | 5 00 | 110 00 | 952 00 | 2,152 15 |
| Manitoba..... | 225 00 | | | | 225 00 |
| Saskatchewan..... | 55 00 | | | 100 00 | 155 00 |
| Alberta..... | 105 00 | | 5 00 | 300 00 | 410 00 |
| British Columbia..... | 150 00 | | | 611 20 | 761 20 |
| Foreign..... | 25 00 | | 10 00 | | 35 00 |
| | 2,895 30 | 20 00 | 405 00 | 3,643 20 | 6,963 50 |

"C"—PATENT MEDICINES NET REVENUE, 1927-28

| | Penalties | Registra- Fees at at \$2 each | License Fees at \$1.00 each | Total |
|---------------------------|-----------|-------------------------------------|-----------------------------------|----------|
| | \$ cts. | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | | 24 00 | 78 00 | 102 00 |
| New Brunswick..... | | 38 00 | 126 00 | 164 00 |
| Prince Edward Island..... | | | 6 00 | 6 00 |
| Quebec..... | 50 00 | 502 00 | 1,651 00 | 2,203 00 |
| Ontario..... | | 392 00 | 2,278 00 | 2,670 00 |
| Manitoba..... | | 34 00 | 184 00 | 218 00 |
| Saskatchewan..... | | | 39 00 | 39 00 |
| Alberta..... | | 48 00 | 127 00 | 175 00 |
| British Columbia..... | | 30 00 | 75 00 | 105 00 |
| Foreign..... | | 73 00 | 806 00 | 879 00 |
| | 50 00 | 1,141 00 | 5,370 00 | 6,561 00 |

"D"—SICK MARINERS' DUES REVENUE, 1927-28

| Province | Total | Refunds | Net |
|---------------------------|------------|----------|------------|
| | \$ cts. | \$ cts. | \$ cts. |
| Nova Scotia..... | 51,606 28 | 101 26 | 51,505 02 |
| New Brunswick..... | 20,187 38 | 124 00 | 20,063 38 |
| Prince Edward Island..... | 1,340 54 | 2 00 | 1,338 54 |
| Quebec..... | 67,365 53 | 482 06 | 66,883 47 |
| British Columbia..... | 82,783 73 | 526 06 | 82,257 67 |
| | 223,283 46 | 1,235 38 | 222,048 08 |

"E"—CASUAL REVENUE, 1927-28

| | Total |
|---|-----------|
| | \$ cts. |
| Fumigation of Ships..... | 22,252 50 |
| Hospital care of passengers..... | 14,354 00 |
| Use of launch..... | 1,800 00 |
| Refunds acct. of previous year's appropriation..... | 549 65 |
| Sundry sales..... | 87 00 |
| | 39,044 15 |

